EDUCATION

Devoted to the Science, Art, Philosophy and Literature of Education

VOL. XXIX MARCH, 1909 No. 7

The Public School and Industrial Education

CHARLES A. KING, MANUAL TRAINING DEPARTMENT, EASTERN HIGH SCHOOL, BAY CITY, MICHIGAN

THE fact, that in many places manual training is being subjected to adverse criticism is the result of the failure of the mass of the people to appreciate its educational value, and to their refusal to consider it as anything but a feeder for the mechanical trades, despite all that has been written and said during the past thirty years, yet the present organization may easily prove the stepping stone to the solution of some important industrial problems. Manual training has at least demonstrated that a smattering of many different kinds of work may be taught in the schools, and that a certain degree of ability to perform a few simple mechanical processes may be acquired.

This has led many people to infer that if the courses were judiciously planned and conducted, by specializing upon one particular industry the student would acquire a commercially valuable efficiency in it.

It is perfectly practicable to arrange a system of hand work beginning with the lower grades and extending through the high school which will train the pupil, so that at graduation he will be able to enter some form of industrial work as a workman of recognized qualifications and value.

If a student is not headed toward industrial life, the work of the grades and the first year of the high school would produce

as desirable results as are obtained by the present methods of manual training.

Every teacher of hand work appreciates the difference in the degree of natural ability possessed by the individuals of their beginning classes, this is caused by the degree of basic skill or mechanical taste with which each student may be endowed. It is the degree of this skill or natural aptitude which makes the difference between the poor, the average and the first-class workman, as it is the basis upon which special skill of every description must be founded.

A large degree of this basic skill is the heritage of some children; these intuitively seek mechanical amusements and environment, and through their childhood unconsciously develop their natural endowment. If, during youth, they enter mechanical work their progress will be rapid, and when arrived at maturity they will be the finest workmen in their chosen trades. Other boys have a less natural endowment, perhaps none at all, and have had no environment which would create mechanical tastes or interest, yet both of these boys may, perhaps unconsciously, be destined to the lives of artisans, and upon entering the shop the first boy will soon outstrip the other.

If a certain amount of basic skill had been created and developed during the school life of the second boy, there would have been less difference between him and his schoolmate; and while he would probably not make the rapid advancement of the boy with the greater natural gifts, he would be spared much humiliation and discouragement, and his progress would be such that he could reasonably expect to attain a far more desirable place than is possible under present industrial conditions.

For the purposes of this paper we will assume that basic skill is composed of three factors, and the individual having the best possible endowment of all of them will possess 100 per cent of basic skill. In such a case, the brain as a factor will equal 50 per cent, the eye 25 per cent and the hand 25 per cent. The sum of native mechanical adaptability of either or all of these factors equals the degree of basic skill possessed by

the individual, and will be an important item in his success as a workman should he become one. The failure of the mass of workmen to pass the grade of mediocrity is due to the fact that one or more of the factors of basic skill have not been developed to the degree necessary to enable them to bring forth the results which alone will entitle them to a better place.

By giving special attention to the development of the particular factors of skill in which the workman is most deficient, the writer believes it is quite possible to remedy the deficiency to a great extent. It is possible to arrange a series of exercises or tests which will show the natural gifts, or the degree of efficiency possessed by each of the three factors of skill when the student enters the trade school, and keep tab on his development with sufficient accuracy to allow of arrangement of work to suit individual cases.

If the apprentice does not possess a moderate degree of basic skill, either natural or acquired, it must be obtained before he can reach even a fair degree of efficiency, or he will simply be a mechanical mechanic, lacking the intuition, skill and interest which the first-class workman must possess.

Ordinarily this basic skill is acquired simultaneously with special skill upon actual work, thus requiring more time to attain efficiency than if there were a good degree of basic skill to begin with. If the apprentice waits until he has nearly reached maturity before beginning to learn his trade, he will probably never attain the efficiency nor the workman's automatic skill and intuition to the same degree possible, had he begun during the impressionable years of his life.

It is between the sixth and twelfth years of a child's life that basic skill, not special skill in any trade, but the foundation for it may be best acquired, as these are the years during which the physical and mental habits may be most effectually moulded. If a good degree of this skill is obtained during these years, the writer is convinced that professional efficiency will be gained by the average normal boy or young man in from one third to two thirds of the time necessary if he were obliged to go to work immediately upon leaving the grammar school without this training.

To sum up, the writer believes it is possible to create and develop in the average student the taste for mechanics, the ability of the brain to conceive and dictate, the eye to guide, and the hand to perform. Many boys have these gifts by natural endowment, and many others are not so fortunate, but may by training receive an equivalent, and the number available for mechanics thereby largely increased.

The methods of developing basic skill in the lower grades should not include slight, delicate motions, nor require continuous concentration of either of the factors of skill upon small details, as children of these grades cannot work to advantage upon such work. Instead, they should be given work requiring broad, free movements; the imperfections of such work may be plainly seen at a distance, not requiring close scrutiny to detect them.

In this way freedom of movement will be gained, bold methods of work will result, and awkwardness will be eliminated to a degree greater than might result from years of work at a later period in life.

Neither should the children of these grades be taught anything of any special trade, excepting incidentally, never as trade instruction, as they have neither the mental maturity nor the physical strength necessary to undertake this sort of work to advantage.

Trade instruction means the use of tools, therefore includes mechanical processes and methods of work, which will be learned much faster and better at a later time if the greatest possible degree of basic skill is developed in the lower grades.

Mechanical methods of work result in a comparatively small amount of good from an educational standpoint, therefore in most of the work in the lower grades the student should depend upon the tools which the Almighty has given him—the brain, the eye and the hand—exercising them as much as possible, rarely using the square, compass, or any other tool which will take the place of the direct exercise of either of the three factors of skill. The basic skill thus acquired will make possible far greater efficiency in the use of tools and instruments of precision of the seventh and eighth grades, and also cultivate the power

to retain and reproduce visual impressions, which is of importance to everyone, especially to the artisan.

Crude work will at first result, but it should improve rapidly, although the quality of work done in the lower grades is not so important as the results obtained in the co-ordination of the three factors of skill.

These methods are not apt to result in a very fine exhibition of work which may prevent their ever attaining a great degree of popularity, as alas, the number and size of the models form the standard by which the work of the teacher and the efficiency of the department are judged by the people at large; the best results to the pupil cannot be accurately measured nor weighed any more than in history, language or other studies; though the visible results may be used to compare one student with another, it will probably never be possible to measure exactly the progress of the three factors of skill.

The mechanic deals with substances, and all substance has form. It requires years under ordinary conditions to know form, not in its æsthetic sense only, though that includes all, but the form of edges, angles, planes, curves, surfaces; absolute, relative and comparative proportions. The ability to detect irregularities and inaccuracies can only come by long training of the brain to conceive the desired form, the eye to detect it, and the hand to acquire the necessary skill to obey the brain and eye, though this latter will follow as fast as the other two factors are trained to do their share of the work, thus the training of the three factors of skill obtained early in life will be of inestimable value to the future artisan.

Correct methods of training will develop taste and a considerable degree of knowledge of artistic form, which is valuable from a purely mechanical standpoint. This is of great value to the artisan, though few possess it, and fewer still realize its value, but it is, perhaps, the greatest point of advantage possessed by the European workman over the American.

Dr. Andrews, in the English Mechanic, says: "The correct forms to be given to the materials to be employed in the construction of tools or machinery, depend entirely upon natural principles. Natural form consists in giving to each part the

exact proportion that will enable it to fulfill its assigned duty with the smallest expenditure of material, and in placing each portion of the materials under the most favorable conditions that the circumstances will admit of. Such form is not only the most economical, but, strange to say, it is always correct in every respect, and invariably beautiful and lovely in its outlines."

The possession of this knowledge of form will result in better and more artistic work, but on account of its having true form, the work will have more intrinsic value. This does not apply to trades in which the results are obtained by machinery so much as to those which depend upon the individual workman, though in all cases the conscious power to do well will generate its own instinct.

The hand will not perform an exercise more neatly nor with greater accuracy than the brain has been trained to dictate, nor the eye to guide, therefore the brain, eye and hand, should be trained simultaneously, not only in the grades, but throughout the years spent in the high school.

A student leaving school when he has finished his grade work, will, upon entering the shop or factory, begin at the bottom of the ladder. The few trade processes he may have learned in the manual training classes will be of little value to him as he will rarely be given work upon which they can be used, and by the time he is placed upon this work he will have learned them naturally.

The only real benefit he has derived from his manual training work from the industrial standpoint, is the basic skill which he has incidentally acquired, and it is upon this that his future progress must depend. Therefore it is of greater advantage to the student and to the city if the school equipment is used in so teaching the student that when he enters the shop, he will be able to mount the rungs of the ladder in the shortest possible time, which end can be best served by strengthening the foundation of the whole matter, basic skill.

In order to carry out instruction of this sort it is necessary that different forms of handicraft should be employed as the medium of instruction. Many of those at present in use are

perfectly adaptable, but among so many there must be some to be preferred above others when considered from the standpoints of educational efficiency, economy, adaptability to school conditions, and the ability to create and retain interest.

These conditions should be summed up, and the different forms of handicraft considered from the standpoint of their efficiency in creating basic skill.

The writer suggests that the five lower grades work upon the blackboard, and clay modeling, including pottery, the work being planned to demand large curves and sweeps, and broad free motions, carefully omitting small details.

In the fifth or sixth grades simple Venetian iron work and elementary wood carving should be introduced, the work upon the blackboard and in the clay continuing. The carving should be such that it will be the means of imparting a knowledge of the laws governing form, and the arrangement of masses, rather than a means of learning to make absolutely clean cuts, unless they may be obtained without too much minute work, as at this time smooth work is of secondary importance. The finer work should be practiced in the last two years of the grade work and in the high school trade courses, when it will be more practicable to hold the student to continuous good work than in the lower classes.

The above work offers small opportunity for mechanical precision in the lower grades, everything being the direct result of the co-ordination of the brain, and one or both of the other factors of skill.

The seventh and eighth grades should be taught woodwork and Venetian iron work, as well adapted to improve the instinct for form; the basic skill acquired in the first six grades will enable the student to make far greater progress than the one who begins his tool work without any preliminary training.

The use of the blackboard, clay modeling and wood carving should continue through the two higher grades, each student doing his bench work from blackboard sketches, making free-hand sketches, and working drawings of everything he makes, thus developing his facility for graphic expression, which is of inestimable value to the artisan, and at the same time obtain a working knowledge of plans.

The time spent upon this work should be varied between one and one-half and two and one-half hours in the first grade to four to six hours per week in the eighth grade, besides being correlated with the other work as much as possible.

The work of the lower grades may be taught by the teachers, but part of that of the fifth and sixth grades should be taught by special instructors. This work will result in the co-ordination of the three factors of skill which will make the student of more value as an apprentice, and more apt in learning any mechanical trade if he is unable to go to the high school. The students headed for business or professional life may still have the benefits to be derived from a course in manual training.

If the student enters the high school intending to take one of the trade courses, this and the scholastic work should be so arranged that there may be at least fifteen full hours per week in the shop.

If necessary the time during which the classes are held may be extended in order to obtain time for work in mathematics, chemistry and physics, and one or more cultural studies; at least two of these studies should be carried all of the time, and all correlated to the greatest extent possible with the work of the industrial courses; as the students taking this work are not headed toward a college or university course, the work should have as much of practical value to the future workman as possible, regardless of its bearing upon college work.

It should be the aim of a course of this sort to produce students who will not consider work from the technical standpoint, but to train them to a knowledge of the fundamentals of certain trades, and to develop the power to think, therefore elevating the standard of the entire body of workmen as fast as men of this type take their places in the ranks of producers.

In many shops a bonus is paid the workmen for improvements in the production, or methods of manufacturing. This goes to the man who can think, and any trade education which does not include definite training of the power of thought is not developing the type of workmen demanded by our modern conditions, and is not fulfilling its highest mission.

The shop work of the first year in the high school should

consist of preliminary work in the different industries taught, as there is more or less connection between them, and during this time should be laid the foundation for the special work in mechanical drawing, which will later constitute part of the work of the trade courses.

Upon completion of this preliminary year's work the student will be better able to select, and the teachers to advise, regarding the industry in which he should specialize. The three remaining years of the high school course should be spent in learning as much as possible of the theory and practice of the trade which the student has decided to learn.

By omitting the preliminary work the course could be completed in three years or the course itself cut down to two years, though the writer believes that enough would be lost if this were done to make it impossible to obtain the desired results.

It is especially desirable that the teachers of the trades should not be men who have received their training at a technical school, or the industrial courses will soon become technical courses, and the students will not look at their work from the standpoint they should; thus the main object of the trade courses would be side tracked. The teachers should have a thorough practical knowledge of their trades, gained by years of experience upon many different kinds of work; men who feel that their trades are valuable possessions, who will keep up with the best progress in their special lines of work, and not think that they have reached the top round of the ladder. Of course they should be men of the personality suitable to their work, with a general culture which will enable them to associate with other teachers upon terms of equality. This latter qualification will not be so hard to meet as to find men of the proper training and ability to teach, despite the fact that few people think that culture and overalls are a possible combination.

If it is possible, arrangements should be made for the teachers of the industrial classes to take their students at stated times to work in the local shops upon the regular work, conforming in all things to shop customs. This will give a practical experience impossible to obtain in an educational

institution, and when the students have attained sufficient proficiency they should receive compensation for their work. If this method is followed it will be unnecessary for the school to have more than a very moderate equipment of the more common appliances used in each trade, only enough to teach the processes and to familiarize the students with the use of machinery.

During the time spent upon the distinctively trade work there must be as much work of a practical nature as possible, not only upon a regular course of typical problems, but upon the general equipment of the school. Under certain conditions some of the municipal repairing and construction may be undertaken.

At all times the administration of the work should be upon the basis of an up-to-date shop, everything operated upon a commercial basis as much as possible.

A night school should be conducted for the benefit of those actually engaged in the trade during the daytime, and wish special instruction; also for those who wish to rise above the ranks of mere labor.

No one develops beyond his ideals, and the public school system can give the student nothing of more value in his future contact with men, than the knowledge of, and the ambition to make the most of his own abilities.

This work should fit the students to advance rapidly to the ranks of the highest skilled and best paid workmen, on account of their superior mental training, and to the most important positions in the shops, according to their ability and personality. The truism that "knowledge is power" is not so vital as that "mental capacity is superior to mere knowledge."

Most boys who receive a course of this sort, will, upon leaving school enter at once upon the practice of the trade upon which they have specialized, for the reasons that they have conceived a liking for it, and that they can command a higher income at once than in any other employment. This will prevent drifting from one thing to another and ending, as so many have, in doing nothing which cannot be done by any one with slight training and experience.

All methods of creating basic skill are just as applicable to girls as to boys. Their work for the first six grades should be the same, but at the seventh grade their work should separate, the boys taking elementary woodwork as leading to the trade courses of the high school, the girls entering cooking and sewing classes as pointing to a thorough course in domestic science, including nursing. The work for the girls should also include dressmaking, millinery, and other trades suitable for women.

It seems that the movement toward industrial education has almost entirely considered the boys, but the home is the backbone of the nation, and of all the best progress.

If the "hand that rocks the cradle is the hand that rules the world," then much more attention should be paid to the homemakers of the next generation. Without the modest homes of the artisans and of others who are obliged to make both ends meet upon a moderate income, there would be little hope for the future generations, as many of the establishments of the fashionable and their apes, are anything but fit places to rear a generation of children who are destined to be the nation's mainstay during the coming years. Any movement toward industrial education will be shorn of its best results unless there is an equal opportunity given the girls to prepare for their work as homemakers, not to conduct an establishment, but to maintain a modest home economically and well.

The following chart is for the purpose of illustration only, and shows the value of the elements entering into the composition of the highest degree of commercial skill, and the periods of a student's education, either in the schools or the shops in which they may be acquired. The percentages are of course assumed, but from the author's experience upon practical work, as a teacher of manual training in the grades and high school, and in connection with trade schools, he believes they are fair.

In compiling this chart, it has been the endeavor to analyze the skill possessed by the first-class workman, and to theoretically demonstrate that a boy from the grades may average fifty-six per cent of the highest commercially valuable skill, plus what he may learn of the science and theory of his trade from other sources, while the boy from the high school trade course

CHART ANALYZING COMMERCIALLY VALUABLE SKILL, AND INDICATING WHERE, AND AT WHAT AGES IT SHOULD BE ACQUIRED.

COMPOSITION OF SKILL.	ABILITIES THE SKILLED WORKMAN MUST POSSESS.	VALUE OF ABILITIES.	CHANNELS THROUGH WHICH ABILITIES FIND EXPRESSION.	VALUE OF FACTORS.	TRAINING OBTAINED IN		
					Grades 6–14 yrs.	High School 15–18 yrs.	Shop 19–21 yrs.
BASIC SKILL.	Natural mechanical tastes and unconscious co-ordination of the three factors of skill.	28%	Brain 14% / Eye 7% / Hand 7% — If without basic skill the grade schools should furnish an equivalent.	28%	14% / 7% / 7%		
SPECIAL TRAINING OF THE BRAIN.	Conception of form. Judgment. Special mental acquirements. Appreciation of mechanical accuracy.	36%	Mental processes.	16%		9%	7%
			Knowledge of miscellaneous work and conditions.	12%		7%	5%
			Knowledge of possibilities and limitations of materials, tools and processes.	8%		5%	3%
SPECIAL TRAINING OF THE EYE.	Recognition of desired form. Detection of imperfections and inaccuracies.	18%	Guidance of tools and motions.	10%		6%	4%
			Recognition of condition of materials during progress of processes.	8%		5%	3%
SPECIAL TRAINING OF THE HAND.	Muscular co-ordination necessary to perform all motions demanded in the exercise of special trades.	18%	Skill in manipulating material, tools and appliances.	9%		6%	3%
			Ability to work rapidly and accurately.	9%		6%	3%
			Total value of factors of skill . . 100%				
			Total value of each period of training . . .		28%	44%	28%
			Total value of training = commercially valuable skill			100%	

may attain one hundred per cent, assuming of course that in both cases the boy has a fine natural endowment of basic skill.

Many boys without the high school training will by study and hard work eventually reach as high a place as the more favored boy, but it will require several years longer, and will be true of but a small minority. Such cases will be the result of sheer force of character, natural ability, good habits and attention to business, which, after all has been said, are the qualities which insure success to their possessor, and for which no form of training can be substituted.

Abundant Love

MARTHA SHEPARD LIPPINCOTT

Fill life's cup so full of love
  That no evil may creep in,
Then will earth soon be transformed,
  And no more be courting sin.
Peace, sweet peace, will fill the soul,
  As the rule of love holds sway,
Angel voices then will sing
  Through the long millennial day.

Hearts, o'erflowing with God's love,
  Make the sunshine of the world,
Love and kindness e'er should, then,
  Have their banners all unfurled,
So that all may see the way,
  To the Heavenly Father's light,
Which illumines earth with joy,
  Filling it with sweet delight.

MOORESTOWN, N. J.

The Two Aims of High Schools

ARLAND D. WEEKS, PROFESSOR OF EDUCATION, NORTH DAKOTA AGRICULTURAL COLLEGE

ONE of the greatest difficulties that school administrators have to contend with is the harmonizing of the two distinct aims of the high school, namely, to prepare students for college, and to prepare for life those students who are not going to college. Various studies, as algebra and German, are chiefly of college preparatory value—they are more or less practical if the student stays in school long enough and gets high enough to make use of them. On the other hand, if the student leaves school at sixteen or eighteen years of age, as the majority do, the subjects mentioned are of slight practical value.

The old American "Latin" schools, "Latin grammar" schools or "grammar" schools, of colonial fame, paid scant attention to preparing for life the student who was not going to college. They were simply preparatory.

Later came the "academy." This was a high school with emphasis on preparation for life—not for college. The academy was to be the people's college and fit for life the student who was not to go to college. It did not always succeed, but the aim was worthy.

We are now in the day of the high school. Latin grammar schools and old-time academies, of private or partly private character, have vanished before the inroads of the public high school. The aim of the Latin grammar school, plus the aim of the old academy, is the double aim of the present high school.

The railroads meet the needs of through and local passengers by running different trains. In education we want to arrange it so that any student who gets on board the local can change his mind at any time, and instantaneously be a through passenger. Here is one of the most stubborn difficulties in education.

Notice that if all our young people were assured of a fairly

long school attendance the problem would be easy. But with thousands dropping out from grade to grade in the elementary schools and from year to year in the high schools, the question is different.

Democratic principle is at stake here. In Germany where the schools corresponding in the age of pupils with our high schools are organized to meet the needs of distinct social classes, general society is organized on a feudal or caste basis that is very offensive to American ideas of social equality. We do not want caste education. We must still make it possible for the poorest child to make his way from the log cabin—or the prairie shack—to the White House. The lone district school must point the way to the universities and the professions. At the same time, should the child's educational career be arrested, we do not want to turn him out aimless and jobless, with an incomplete foundation for higher education and with no training for industrial opportunities.

What are we to do?

First: Make the colleges and universities accept for entrance any subject that any high school sees fit to give for the practical education of the student. The character of the work in the universities would be sympathetically changed thereby to some extent, and the spirit of higher education would doubtless be improved.

Second: Secure the enforcement of compulsory education laws and encourage a longer period of school attendance. The state should educate its citizens.

Third: Introduce into the lower schools such subjects as agriculture, domestic science and elementary mechanic arts, subjects which are practical and vocational, and at the same time are suitable as a general preparation for other occupations or for advanced study in appropriate departments of the higher institutions.

Fourth: Instead of setting up mere trade schools for moneyless and various other students of high school age, make industrial training an element in all existing high schools. Crowd out the subjects that are least defensible from any point of view, as Latin, and make room for the trade element.

"How to Teach" Series

IX

Teaching Composition

THOS. C. BLAISDELL, EAST LANSING, MICHIGAN

DURING twenty years, composition teaching has been finding itself. In an occasional school the subject has come to its own. Here it is taught as an art. Many teachers understand that it should be thus taught, and they have been and are groping after this goal. For too many teachers, even to-day, composition is still only a science. In no other subject have text-books improved more rapidly or developed more effectively. Almost every new book, both for grades and for high schools, aims to present the art side, basing the teaching of expression largely upon properly guided practice. That teachers are demanding such books and that authors are striving to make them, promises continued improvement in the teaching of this most important subject.

Composition is expression by means of words, whether oral or written. To teach composition is to train students to the effective expression, not only of thought, but also of feeling. It is not to assign a subject, and then to let the pupil write without guidance and to permit his product to pass without criticism. It is not to have themes written for the waste basket.

The first aim of composition teaching should be power to express readily, vividly and potently; power to express accurately and beautifully should be a secondary aim. A crude, unpolished oratory, abounding in violations of grammar and rhetoric, yet thrilling every nerve and prompting instant action, is far more desirable than a faultless oratory, devitalized and impotent, leaving an audience charmed with its finish, but wholly unmoved. The combination of power and polish is better than either. Lincoln gave it to the world in his immortal Gettysburg speech.

In these respects composition does not differ from oratory.

The teacher's first aim, then, must be the development of power, of effectiveness in expression. One way of accomplishing this is to help the pupil to appreciate and to realize the power that some master workman has displayed. The pupil must see, must feel, that the master has wrought well. The teacher should then show him how the master has wrought, by what methods he has been able to thrill. He must show the student how much has been omitted, how much has been suggested by the few details and by the words of wide association which have been used. He must reduce the master's expression to the simplest statement of fact and show that in this form it is all but powerless. Thus the student will learn that vital power comes from a careful selection of the things to be spoken and of the words used to express them.

The next step is often all but fatal.

The pupil should not be asked to reproduce the work of the master in his own words. Nothing more deadening to power can be devised. The only reproduction work of value in composition is the oral reproduction of a story, for the purpose of really interesting the person or the audience to whom it is told. To rewrite a story, an incident or a character sketch calls only for memory; it requires neither thought nor feeling. The doing of it is usually mere mechanical drudgery, which wearies and discourages the pupil, making him feel that theme writing is only a form of torture. It calls for almost no constructive ability; and from the little girl cutting an ill-shaped dress for her doll to J. Pierpont Morgan assembling into a faultlessly working corporation the warring interests of a continent, the real joy of work is original construction. The course in composition which is based upon reproduction work is hopeless. It may teach something of accuracy (usually it fails even in this), but it can never develop power.

What *should* the next step do? It should show the pupil that in his own life he has had experiences not unlike that which the master writer has caused to live again for his delight. Instead of being asked to reproduce the author's story, he should be asked to tell of his own experience. If he clearly sees that

in his own life there is something worth telling, something of vital interest, then he will be inspired to use all his constructive ability to tell of it; and in the life of every boy and girl there are unnumbered potent experiences, incidents and seed thoughts. Such material should be made the basis of practically all composition work. Nor does this in the least preclude "imaginary" stories, conversations, etc. Such exercises must rest upon new combinations and modifications of experiences.

The reason for making the pupil's experience the basis for his composition work is fundamental. Clear expression results only from clear thinking and vivid feeling. The human mind thinks most clearly concerning those things which it knows best, that is, which are within its experience. It can reproduce vividly only those emotions which have been sincere. The pupil can live again the experiences which took hold upon him. Their interest carved them deep into the tablets of the memory, and they will come back in their original colors almost upon demand.

The duty of making the pupil realize that he has had experiences of more than personal interest is even greater than the duty of showing him how the master author uses his tools. Often a few general suggestions to the class as a whole will prove sufficient. In every class, however, pupils will be found with whom the work must often be done individually. Such work is a woeful time consumer for the busy teacher; but it is the work which really pays. The individual touch with the pupil is the part of a teacher's privilege most potent in developing character.

Where the college entrance examination calls only for themes based upon the required books, it militates against this most effective kind of composition teaching. The essay about a book or about the characters developed in a book of course calls for clear thinking. But it is the thinking of a mature mind, the thinking of a Lowell or a Mabie rather than that of a boy or a girl of eighteen. Theme work of this kind has a place in the advanced courses in secondary schools, but it has only a minor place; it should never become the all in all. My own feeling is that its place in college entrance examinations should be at the most only minor.

The literature of the college entrance requirements, however, may at all times be called upon to furnish, by its appeal to the child's own experience, topics for his composition writing; for the composition work in the secondary school must be based somewhat upon the college entrance work. Parenthetically, what a pity it is that usually the English work in the high school must be the same for the many who never can go to college that it is for the few who will have the advantages of college training. It were far better that the college entrance requirement be power to write, with reasonable accuracy, an interesting theme or series of themes embodying personal experiences of the applicant, together with a test calling for a reasonable knowledge of the essentials of English and American literary history. Besides this should be demanded a teacher's statement that at least a minimum number of recitations have been devoted to the reading of standard poetry and prose. Such requirements would be much less narrowing upon the English work of our high schools.

To show concretely how literature may furnish composition topics, Dunstan's experiences in the fog and darkness as he approaches and leaves the cottage of Silas Marner will suggest to every young person an experience which he has had himself in the fog or the dark; the mob scenes in Julius Cæsar will recall personal experiences in some kind of crowd; the palmer's treatment of the Jew in the fifth chapter of Ivanhoe will bring to mind incidents revealing character; the beautiful allegory in the Holy Grail in which all pleasant things "fell into dust," will suggest occasions when anticipation and realization were at the antipodes; the merry making in L'Allegro and the hours of study in Il Penseroso, or the visits to the theatre in both, will bring back similar incidents in the life of the pupil. Such a use of literature as a foundation for composition work is sane, practical and exceedingly helpful. It not only brings to light composition material, but it also aids in the appreciation of the literature by showing that it has a direct relation to life, and that the fullest appreciation of it is dependent upon the experiences of the reader.

It may seem that this general plan of teaching composition

has value in description and narration, but little if any worth in argumentation and exposition. And yet the demands in argumentation, at least in the secondary school, should be based upon the experiences of the student. That he should from his own seeing and thinking either defend or indict the high school fraternity, the game of football, the study of Latin, the literary society, the out-door gymnasium for every community, the evening public school, the playground in every school yard, the erection of a new high school building, the abandonment of inter-scholastic athletic contests, the value of student government, honor in examinations—that he should affirm or deny the questions which such subjects give rise to is far more practical and helpful than that he should debate questions relative to the inheritance tax, the referendum, or a revision of the tariff. In one instance the subjects are close to life, are within his experience, are of vital interest to him. As he writes concerning them he will express his own opinions, he will find himself doing what is really original thinking. In the discussion of the other questions he can only reflect the thoughts of others as he has gathered them from his reading. In the secondary school, questions of state or national importance may be discussed for the sake of information, but real work in argumentation should be based upon questions of immediate interest to the pupil.

Formal exposition seems to have but small right in the grammar or the secondary school. Yet there is within the experience of every pupil plenty of material for a kind of exposition which is of real value in composition. This work not only has inherent interest; it also has especial value in developing the power of expression because it peculiarly calls for clear and logical thinking.

To ask the members of a class to tell in writing what they think of a sturdy college sophomore, who, in a class rush, selects as his opponent a diminutive, one-armed freshman, is to call for a kind of exposition which is far more productive of thought than the common "how-it-is-made" kind, and which also is easily within the power of the students. Likewise to ask them to express their opinion concerning a student who

prepares his Virgil with the aid of a "pony"; concerning a student who comes to an examination with notes, which he intends to use if possible; concerning a teacher who says he will punish an offence in a certain way and then fails to do so; concerning a school superintendent who demands that boys shall not smoke cigarettes and yet smokes himself; concerning a girl who lets her mother do the household work that she may keep her hands dainty; concerning a boy who stays at home to read to grandmother instead of going out to play ball; concerning a minister who takes a hand in a social game of cards in the back room of the grocery; concerning the girl who deliberately retains her car fare because the conductor by chance fails to collect it; concerning a boy who declares himself to be out at home plate when the run is needed, although the umpire has called him safe—to ask pupils to put into writing their opinions concerning persons who have done such things is to give a drill in exposition that is exceptionally helpful in training students to crystallize opinions that otherwise will be but partially formed, or even chaotic. Such work in exposition, based only upon the pupil's experience, helps him to mould into definite conclusions what have been mere impressions.

It is well that composition work should train pupils to understand the so-called forms of discourse. At the same time they should not be given the idea that narration, description, exposition and argumentation are fundamentally different forms of writing, or that the literary master deliberately chooses some one of these forms, and confines himself to it. Composition work should rather lead pupils to understand that the master may, in a single paragraph, make use of all four of the forms.

It is fundamental, however, that in the teaching of composition the instructor shall make clear the fact that in literature there are certain entirely distinct forms of writing. What may be called the fact form, which is used merely to present facts in the baldest prose manner, has less value than many instructors assume. The detail form, in which an experience is made to live and to thrill by the use of selected details, which are suggestive of the whole experience, is of special value in narration and description. The figurative form, which

clothes the plain prose of fundamental truths in an interesting and attractive garb, is of special value in exposition and argumentation.

To show concretely what is meant by these forms of expression, the following quotations from Francis Parkman may be helpful:—

In one place, speaking in the fact way, he says, "It was April."

Again, desirous of basing the Canadian winter upon a fundamental truth, which will make the reader appreciate its terrors, he says, in the figurative manner, "The wintry purgatory wore away."

Next he wishes only to lift the reader to a realization of the splendor of the coming spring; so he says the same thing by means of many details, presenting to the imagination a series of beautiful pictures, all of which, combining themselves in the imagination, make the reader once more live through the glories of a spring time: "The icy stalactites that hung from the cliffs fell crashing to the earth; the clamor of the wild geese was heard; the bluebirds appeared in the naked woods; the water-willows were covered with their soft caterpillar-like blossoms; the twigs of the swamp-maple were flushed with ruddy bloom; the ash hung out its black tufts; the shad bush seemed a wreath of snow; the white stars of the blood-root gleamed among the dark fallen leaves; and in the young grass of the wet meadows the marsh-marigolds shone like spots of gold."

To illustrate in another way, a student wrote in practically the fact form, "As I came into camp the smell of the cooking supper was very pleasant to me."

As he restated the same fact in the detail way, he wrote, "When I came into camp the pungent fragrance of the coffee, and the spicy smell of the bacon and eggs, made my mouth water, and I found myself moistening my lips."

A girl wrote in little more than a fact way, "The floor was filled with merry dancers."

When asked to rewrite more in the detail manner, she in part changed her details into figures, writing, "The floor was alive with rosy-cheeked, laughing-eyed dancers."

The power added by the introduction of the details in these simple illustrations is so manifest as to render comment unnecessary; and yet unnumbered students go through high school, and even through college, without ever knowing that there is such a thing as detail writing; and there are occasional instructors who insist that it is a mistaken pedagogy which aims at any higher goal in composition work than a bald rhetorical and grammatical statement of uninteresting facts, or a similar literal reproduction of the work of a master.*

The goal in composition work in secondary schools and in colleges should certainly be something not unlike literature. Even in the grades such a goal is not impracticable. A pupil in the eighth grade, speaking of an unusual cloud, wrote:—

"Finally it appeared to be a horse whose outlines were as clear and perfect as though it were alive. There was the broad curve of the neck, the beautiful mane, the small curved ears, the fiery nostrils, the hind feet spread apart, and one of the fore feet raised half way. In fact he appeared to be one of those noble and spirited war horses just in the act of rushing upon the foe at the command of his rider."

Clearly the writer was here moved by real feeling, and he succeeded by means of his detail work in conveying at least something of his feeling. There is no reason why pupils in the grades should not be taught consciously to select details, and to use them for the purpose of suggestion. It is possible that much of our failure to secure desirable results in composition is due to a grammatical and rhetorical goal rather than to a literary goal. Grammar and rhetoric have a value, but they are without power to develop potent expression.

Grammar fundamentally is designed to give the student certain principles by which he may himself determine whether his sentences are complete and clear. To attain this end it must be studied largely by means of concrete illustrations; that is, its art side must be emphasized far more than its science side. Rhetoric fundamentally is designed to develop principles that will enable the student to know whether his work is clear,

* This general phase of composition work is treated at length in the writer's Composition-Rhetoric.

forceful, coherent, unified, euphonious. The study of the rules, of the science, however, can accomplish little. The art side, the concrete illustration from the master, is the valuable side. Bunyan studied the Bible, not a text-book of rhetoric; Franklin read and then rewrote Addison, comparing his result with the original; Ruskin was steeped in the Bible, and other great literature; Lincoln knew Shakespeare, but never a rhetoric. I have yet to find a man who is earning his bread with his pen who will acknowledge any great debt to the rhetoric. The science side has a place, especially in emphasizing unity and coherence, but it is a much less important place than it usually occupies. Teach rhetoric—yes; but as a means, not an end. When this idol of the schools is overthrown, and the art side really comes to its rights, the results of English teaching will be far more nearly satisfactory.

A word about training for accuracy may be appropriate. Accuracy will never be attained through strictly class work. The individual touch is essential. Nor will anything be accomplished if the teacher corrects errors, expecting the pupil to avoid future mistakes by studying the revisions made for him. He will learn to avoid errors only by being compelled to think about them, and almost the only way to accomplish even a little in this respect is to compel him to make his corrections himself.

The instructor should indicate on every theme the rhetorical and grammatical errors. This may be done by proof-reader's marks and by abbreviations placed on the margin opposite the error, or it may be done yet more effectively by the use of numbers referring to a digest of rhetorical principles. When he receives the paper it is the duty of the pupil to study the principle violated, to discover his violation of it, and to make the necessary correction. To learn that the corrections have been properly made the instructor must once more glance over the paper. If the changes are in red ink this may be done very rapidly. At the best, however, the composition teacher has his full share of real drudgery. School officials in time will understand this more fully and will realize the necessity of giving to composition teachers small classes and comparatively few reci-

tation periods. After the corrections have been made it is a mistake to ask the pupil to copy his work again, unless his paper is carelessly prepared. That makes out of his composition writing such a task as it should never be permitted to become.

To sum up, in the teaching of composition it must be remembered that clear expression can come only from clear thinking, and that the pupil will think most lucidly concerning those things which are real to his life. Therefore composition work should be based almost wholly upon such subjects. Further, the pupil should be taught the way in which the master accomplishes a certain piece of work, and should be guided in the use of these methods. He should be taught to understand and to use the figurative and the detail forms of writing, and he should be compelled to correct, under proper guidance, his own errors. Such subjects will inspire the student to serious effort and will result in work that will develop effective expression. Such an understanding of literary methods and of the fundamental forms of expression will wonderfully increase both his appreciation of literature and his ability to speak and to write with fluency and with power. Such a study of individual errors will result in a degree of accuracy which cannot be attained by merely learning the science of rhetoric and which the correction of errors by the instructor can never even approximate.

The Normal School Ideal

FRANK WEBSTER SMITH

I

[Some normal schools attempt to train both elementary and secondary teachers. They can do this legitimately only by maintaining special classes in all the main studies of a professional course, and by providing secondary grades for practice teaching. In other words, they must be to a large extent double. This is necessary because the conditions for training secondary teachers differ so radically from those required for training elementary teachers that it is out of the question to unite both classes in the same course. The typical normal school to-day is not equipped to do the double duty. I shall keep in mind in these articles the typical normal school equipped to train elementary teachers. I shall discuss the training of secondary teachers elsewhere.]

THE first purpose of any normal school is to be a guide and inspiration for the locality it was established to serve, and to meet sympathetically the teaching conditions of that locality. These local conditions vary strikingly in different parts of the country. Hence the aims of normal schools must vary. We must judge the merit of a school by its success in serving in a practical way its environs which represent its real constituency (though it may, of course, draw scatteringly from a wider territory). But there is danger in this very attempt to meet the needs of such a restricted area. It is easy for such a school to become a static instead of a dynamic force. In the latter case only does it truly serve its community, because it appreciates and supplies its needs, and at the same time leads it gradually out of its present educational self to something finer—from its present educational level to something beyond, but yet so closely related to the present that it can be easily appreciated and won. A normal school, that is to say, is not a mere reflector of tone; it creates tone.

Now it is the ideal in normal school work that gives this dynamic element—this spirit of progress in its aim. It is the purpose of these articles to outline a course of training calcu-

lated to meet various local conditions. It will at the same time give one view of a normal school ideal. All its elements will appear in the curriculum of any normal school. Proportions, however, will vary.

Briefly, then, normal training is threefold. It includes a broad and appreciative knowledge of the subject-matter to be taught, an equally broad and appreciative knowledge of the child to be taught, and a mastery of method which brings the three vital factors in education—teacher, child, and educative material, machinery and opportunity—into a truly productive combination which will work out our aim.

Evidently, then, a normal course of study must include a special study of the elementary school subjects, child physiology and psychology, general psychology, general and special method, and school organization and management. To show relations and give means of interpretation it must also include a careful study of the history of theory and practice in education, and of other subjects—literature, history, biology, sociology—which make for culture on the one hand, and give wider and surer educational intuitions on the other. Both as a basis and as a test for all this, special attention must be given to practice teaching under criticism. But beyond all this, and giving tone and force to it, we must include what we call general culture which comes from various sources and in various ways. In the present article I shall confine myself to the first element of this course.

The forming teacher must make himself master of the subjects to be taught in the schools in which he is to teach. He must not only make himself more fully master of them than he was before, but master in a way he has not considered before. We have heard much of the need of thoroughness in knowledge, but if we should try to get at the value of the expression I dare say it would be found to have little meaning. At the best its meaning would be very narrow and circumscribed. In the first place the term is applied rather indiscriminately. Thoroughness is not an absolute expression; its meaning and force are not uniform. Thoroughness in the elementary school means one thing. In the secondary school

it means another. Again, thoroughness involves much more than would appear at first sight. It includes, first, a mastery of the common facts which have been systematized and unified and labeled with the names arithmetic, geography, and all the rest—a mastery which carries with it the feeling of "at-homeness." But this is the smallest part and the simplest part of its meaning. One must not only know the facts, which are, after all, isolated and, in a way, lifeless items; he must know the meaning of these facts, their relations to the facts of other subjects, their practical utility in application to individual and community life, and their educational value in developing individual power. Further than this, he must know the literature of these subjects. He would be the stronger if he knew their history for its help in revealing their life. He is supposed to know the common school subjects before entering the normal school. But he doesn't; much less does he have this appreciation of them to which I have referred. The normal school must therefore not only broaden and strengthen his knowledge of the subjects he is supposed to teach, but must help him to this deeper insight into them, before he is ready to teach. It must, in short, take up each subject anew and give him both mastery and broad appreciation from the teaching point of view. So he will master and control his subjects. More often we find that the subjects control him.

But even when all this has been accomplished we have made but a beginning in this one element of preparation. With this alone a teacher might, and probably would, be practically a failure. It is more difficult, in the case of any one of the common school subjects, to select subject-matter for one's classes than to know the subjects themselves, as far as we have defined the knowing. A teacher must develop an intuition for adapting each study to the child interests about him, before his knowledge of subjects of the curriculum is complete. Here we are met by the query, does not the text-book do this? And we are forced to answer, it rarely does. The text-book has done much for education; as used, it has done much also to hinder education. One must omit, change order of topics, interpolate, reconstruct, before getting our educational material

in the best form to be comprehended by pupils and develop real knowledge and power. If one fails to arouse real interest and enthusiasm he is working with a high coefficient of friction and hence with great waste of time and force, and with marked impoverishment of results. Pupils thus fail to develop even the first element of thoroughness. The text-book is, after all, only a secondary and supplementary agent in education.

Our reading books, especially, might be supposed to relieve the teacher of the necessity of this adaptation. Surely we may follow the book here with implicit confidence. The Board, largely an impersonal agent, supplies a certain number of books for work in any single grade. On examination some pieces are found to be ill-adapted to the grade from the point of view of interest or difficulty. Some are too trivial, some too deep or abstract, some even vicious. We must therefore select, change order, and supply material from various sources and by various methods open to the teacher. This same thing is true in part of a series of books used to develop some special reading method. We must at least supplement and modify to do justice even to the method. Some systems of teaching reading are so unpedagogical that we ought not to try to do justice to them. We should have a free hand with the books, and get the best we can from them by some better system. We are not to teach any book; we are to teach reading and to make children interested in reading. There is a whole world of interest and enthusiasm—a whole psychology—in this one subject.

The same principle applies in other studies. The book is impersonal. Personality counts. That depends upon the teacher and his power to select subject-matter and point of attack in a way to win pupils and get worthy results. The very topics we take up in arithmetic and geography, and the order and manner in which they are presented are often so ill-adapted to the ages we are teaching, and, withal, make the subject so formal that it is no wonder that we find so little real comprehension and such absurd answers in examinations. We lumber our studies with so much ill-considered, ill-adapted, ill-arranged material, *i. e.*, with so much waste material, and we

maintain such false notions of thoroughness that we compromise progress and quality of results. If a child gets hold of the simple series of facts adapted to him and develops real power in the educational process and environment, and develops concurrently real interest, he is in a position to do wonders in practical life or in higher courses. Clogged with the (to him) irrelevant matter, he enters each new phase of education handicapped as to any vital knowledge of anything. He is in a maze.

Happily, in recent years we have taken long steps in the direction of selecting from the broad field of any study the elements most suitable for any given case and adapting them to it.

Now it is one of the most important functions of the normal school to develop judgment for this selective process and for making it effective. This part of normal training needs much more attention than it has received.

Soul Growth

N. K. GRIGGS

But the rich, ripe fruitage,
Of the world's best toil,
Grows seldom in the courts or marts;
For the germs that quicken,
In that thin, hot soil,
Come seldom unto God's full hearts.

Teaching Pupils to Study

WILLIAM C. RUEDIGER, GEORGE WASHINGTON UNIVERSITY, WASHINGTON, D. C.

FROM the academic standpoint the school course should have a twofold effect upon the student. It should leave him (1) with a body of knowledge well organized, and (2) with a method of study of which he is explicitly conscious. Besides knowing his grammar, geography, history, etc., the student should feel that he can carry on intelligent work in these branches on his own account, and even in those that he did not study in school. He should have learned how to attack a lesson, a topic, a book, or a branch of knowledge, and after having given it his attention, he should feel confident that he has at his command its main propositions and some of the details or data on which these propositions rest.

The value of knowing how to study is great and manifold. In general it is for the sake of facilitating subsequent acquisition. In a democratic country like ours this is of quite as great importance as the acquisition of subject-matter itself. Our pupils are not to be loyal and obedient subjects, but intelligent citizens that are to participate in affairs. But the knowledge acquired in school seldom, if ever, fully meets the problems in life. It must be supplemented on every hand. To take part in social, political and professional life, a man must have initiative. He must have the ability to attack new problems on their own merits, confident that he is taking an intelligent hold.

Consider for a moment the callings of medicine, dentistry, teaching and the ministry. Over and over again we find failure in these due to the fact that the man did not know how to keep abreast in his field. He took it for granted that he had learned his profession in college. He had not been made aware of the fact that he was entering a field of study as well as of practice, for the practice of a profession is certainly as

much a continual study as it is the application of something learned in college. The physician that is practicing to-day as he did ten years ago is probably wondering why his practice is falling off. The fact that an experienced teacher is teaching to-day the same subject-matter that he taught when he entered the profession, and in the same way, may, in most branches, be taken as a just cause for his removal. What holds true in medicine and teaching, holds true as well in the other professions, and to a large extent also in the non-professional callings. The world is moving rapidly, and an efficient method of study must be at the command of everyone who wishes to keep abreast.

When a person, who has not learned to study independently, feels that he is lagging behind, he is obliged to go to college again and learn if he wishes to catch up. By himself he feels helpless. Still it is true that practically every advance that has been made in his field has been recorded by the press and is at his disposal. Professional journals record advances as fast as they are made, and new books sum up the progress in any particular field every little while. But the majority of those who should be benefited by assimilating this material do not even know that it exists. It is safe to say that but few teachers in the grades and in the high school have read the books pertaining to their fields that have been published in the last two or three years.

I am aware, of course, that not knowing how to study is not the only cause of the lack of progress in many people. Such factors as natural ability, scientific training, and interest in one's calling also enter. Still it cannot well be doubted that many people could be made much more self-helpful than they are.

In self-culture, too, knowing how to study is essential. There are many people with leisure on their hands who would gladly spend some of their spare time in advancing their knowledge, both for their own and for the social good, but they do not know how to go about it. They are literally lost. They can go ahead only when tasks are definitely assigned them, for they have never learned how to assign their own tasks. As a result their whole mental life is greatly restricted.

The question may be raised whether a person can acquire knowledge worthy of that name at all, even with the aid of a teacher, without knowing how to study. One remains well within the truth when one says that many of the graduates of our high schools have, after a year or two, but little more than a general impression and their diplomas to show for their pains. Had their knowledge been organized, that is, had they really studied, this could hardly be so. With the exception of the portion that is mechanized, knowledge that is to be retained must be organized. But organization is a conscious process. It must be done by the pupil himself, and to meet his own peculiar needs. All that the teacher can do is to help in furnishing the proper conditions.

The extent to which the art of study has been neglected is indicated by the dearth of literature on the subject. Hinsdale's Art of Study is practically the only book in the field. Not only is the subject neglected from the grades to the university, but even the training schools for teachers seldom give systematic attention to it. Where it is considered it is done by individual teachers who have, on their own account, come to recognize its importance. One of these teachers is Prof. F. M. McMurry at Teachers College, Columbia University. He thinks, and rightly, that the matter is of fundamental importance in pedagogy and that we have missed some of the most important problems in education because of its neglect.

Why this subject has been left in the background it is difficult to say. Perhaps the problem has not been seen because it has been implicitly assumed that proper methods of teaching implied proper methods of study. No doubt this should be the case, but so far it certainly has not been. In our devotion to the proper presentation of the subject-matter by the teacher, the response of the pupil has been largely lost sight of. He has been obliged to learn according to a prescribed plan, thrust upon him from without, the *rationale* of which was never explicitly brought to his attention. The teacher and not the pupil takes the initiative; but in studying the initiative must come in the main from the pupil himself. It is right here that we find one of the weakest spots in our present educational practice.

The principles underlying the art of study are, in the main, the same as those underlying the art of teaching. The difference is largely one of co-operation. In the latter the teacher alone is conscious of the principles according to which the mind most readily assimilates knowledge, while in the former he endeavors to make the pupils also conscious of them so that they become in the true sense co-workers.

In undertaking to study any unit of knowledge, be it a branch of science, a book, or a single lesson, the student should, as soon as possible, gain a general idea of the field upon which he is to enter. He should look for and lay hold of the strategic points—the "binding thoughts," as McMurry puts it—for it is not until he has these that he can evaluate and assimilate details. The binding thoughts are essential in that they furnish a basis for apperception and serve to organize the details. There should be a definite aim in studying just as there is in effective teaching. The assignment according to which the pupils study should be a joint product of the teacher and the class.

The general outline of a subject, the leading thought involved, or the question to be answered may be gained in various ways. For a person entering upon a new subject by himself, it is usually a wise plan to read over rapidly the book with which he begins, without stopping to master details or difficult places. When one is somewhat familiar with the field a reading of the chapter headings may give one a sufficient outline. Some writers indicate the field of the book in the introduction, and when this is done a reading of the introduction may serve the purpose. Articles in cyclopedias, and brief treatises found elsewhere may in other cases form the best avenues of approach. Every subject and environment presents its own problem, and every independent student must solve it for himself with such advice as he may be able to get. But the point is that he must first lay hold of the central theme.

The aspect of the problem of gaining binding thoughts that especially concerns us here is its relation to teaching. How is the teacher to lead his pupils to look for them?

To get to the point most concretely, let us take a few specific

examples. Unfortunately we must restrict ourselves to very short extracts, much shorter even than the ordinary lesson in the grades. All that should be inferred from them is the principle. Let us suppose that the following paragraph is the lesson in hand:—

"I am not unaware that important changes have been made in the schools since the 'good old times,' as they are affectionately called. Instruction is far less abstract and far more concrete and real than it was fifty years ago. In good schools such subjects as primary geography and arithmetic are first presented in oral lessons, so that the pupil is not wholly ignorant of the subject when he first takes up the book. It is also true that good teachers work with their pupils, showing them how to use their books. Nor am I forgetting that the most skillful teaching to-day is found in the primary schools." —Hinsdale, The Art of Study, pp. 52–53.

After the paragraph has been read to the class, or all have read it by themselves, the teacher may ask, "What is this paragraph about?" Before pupils have learned to deal with questions like this all kinds of answers will be given. The majority of the class will have given about equal and independent attention to every sentence. Still, the paragraph is about just one thing: Changes in the schools in recent years. The answer need not be put into just these words, but these give the leading thought.

Other examples without number may readily be found by the teacher. In fact, nearly every lesson in every subject is such an example. The following paragraph may serve as another illustration:—

"The future poet (Holmes) was full of childish fancies. He would throw a stone at a tree to get an answer to a question. If he hit the tree he would think the answer was 'Yes.' When he was walking he would try to step from one stone to another, or else walk upon the patches of grass."—Cyr's Third Reader, p. 113.

In this paragraph we have a definite main thought, the childish fancies of the poet, with other thoughts subordinate to it. Before any one of them may be said to have been studied

this main thought must have been grasped and its relation to the data of the paragraph seen.

Learning how to study should not be left to chance, but the teacher should give it specific attention. The fallacy of "incidental learning" applies here no less than elsewhere. Under our present practice it is only the occasional and exceptional student that learns how. Something makes him conscious of the fact that there is a rational and a best way to study, and then he stops to reflect upon the matter. But the majority always plunge in blindly, try to get the substance by memory, seldom get a clear idea without outside assistance, and so find school work distasteful drudgery, to be shunned as soon as school days are over.

In beginning to teach a class to study the teacher and his pupils should approach the lesson with books open. Together they should look for the plan underlying the matter of the text. What is the chief thought of the lesson? Is it worth-knowing? How does the author substantiate it? Does he drag in irrelevant material? Where does a considerable turn in the thought occur? How is the new thought related to the preceding? Is this the thought that best follows logically? Does the author finish one topic before taking up the next, or does he confuse things? Did he have a well-defined plan of procedure in writing the chapter? Did he, perhaps, outline it before he wrote it? Can you make an outline of it? Would a plan of organization different from the author's suit you better? If so, make one.

After the pupils have made some progress in studying under the immediate guidance of the teacher, they should be called upon to do reflective work by themselves. They should at first be guided by such questions as the above in the assignment, but in time they should become independent even of these. They should be led gradually into the habit of approaching every lesson from the standpoint of its organization and its relation to larger thoughts. This would lead them to become more than memory machines or submissive thinkers of other people's thoughts.

Formal lessons on how to study should be given in every

branch of study. Arithmetic, grammar, language, reading, history, geography, and even spelling should receive attention from this standpoint. In high schools and colleges the student's work in literature, science and the ancient and modern languages is often extremely mechanical. Where this is the case the teacher and not the student is usually to blame. It is not the teacher's chief function to quiz on subject-matter or to lecture. Both these are for the time being subordinate to right methods of study on the part of the class which should receive attention first. When this has been done the quiz becomes meaningful to the class, and the knowledge the teacher has to add falls into place.

The second principle underlying the art of study has to do with the details of the lesson. The related ideas or data should be grouped under the leading thoughts. The binding thought is not sufficient in itself; it has to bind something. Its function is to serve as a criterion for the classification, arrangement or organization of the details. On the other hand, the details are necessary to give content to the main thought. Without them it would be but an empty phrase.

The ordinary student goes astray most easily amidst details. He endeavors to master them merely as details. Every fact seems of equal importance to him, and so must be memorized as a thing by itself. Relations between facts and their relative worths he does not look for.

Study of this kind is the direct result of much of our teaching. We merely list facts and require our pupils to learn them. To a greater or less extent every subject lends itself to this tendency. In spelling we list words regardless of their value. Many of the words we teach the pupil will never use, and many others he will use so seldom that their spelling will have been forgotten when they are wanted. In geography the names of countries, cities, rivers, capes, etc., are still memorized as so many independent facts. In history, reading, arithmetic, nature study, etc., similar conditions prevail.

Consider the subject of nature study for a moment. The things in the child's environment are studied, but how is this frequently done? Each thing is either figuratively or literally

dissected and every little detail that is met is given about equal attention with the rest. There is no attempt at unification under a thought that the child can grasp. If the dog is studied, everything from his nose to the end of his tail is noted and talked about. All facts are regarded as being upon the same level, and the work becomes formal and monotonous.

A rational method of teaching or study does not proceed in this way. It does not list facts, but classifies them according to a definite thought or question. In the case of the dog the following might be taken as the aim or binding thought: "Why has the dog become a friend of man?" With this question in mind the pupil will have a definite purpose for noting the dog's characteristics. The details that this aim does not ferret out should be neglected, for they are not germane to the subject in hand. If necessary, they may be approached under another aim.

What holds true in teaching holds true also in studying. Study should always be dominated by a selective thought. If the student doesn't have it as he approaches the subject, as often must be the case, he should be watching for it as he proceeds. Until he has found it he is groping in the dark. The first one he hits upon may not be the best one, but it will bear him along until he sees the need for taking another.

In teaching pupils to group related ideas into classes, the concrete instances given under the first principle may serve us again. The method differs from the former only in the placing of the emphasis. Before, the binding thought was in the center of attention while now it is the details. These are to be noted with a view of classifying them. The pupils must be led to realize that details in themselves are of no value. They gain value only by becoming related or organized.

As before, the teacher and student should again frequently study together with books open. There should be a free exchange of opinion as to what is relatively important or unimportant, and conclusions should be reached conjointly.

When the binding thoughts, as the author conceives them, are not indicated at the beginning of the sections or in the margin, the pupils should be encouraged to write them in for them-

selves. Books that are to be studied should be owned so that they may be marked freely. Marking books is an art and greatly enhances their value, especially for the person who marks them. It enables him, on going through the book again, to tell at a glance, which are the important passages. A quick, effective and intelligent review cannot well be carried on without it. Marginal headings rob the pupil of one of his rights—the right to make them himself.

After small groups of facts have been organized, the classes obtained should in turn be related under larger heads. This should, ideally at least, be continued until all the knowledge in a given field has become one unified system. Such a system is a science.

The relation of thoroughness, relative values, supplementing the text, collateral texts, memorizing, habit formation, and individuality to the art of study cannot be discussed here for want of space.

In conclusion it may be asked, where, in the school course, is the art of study to be taught? Should it be begun in the high school, the upper grades, the intermediate grades, or where?

This question, among others, has been investigated by Miss Lida B. Earhart, at Teachers College, Columbia University, and her results are published in book form, entitled, Systematic Study in the Elementary School. Her investigation did not extend below the fourth grade, but from that grade up the pupils certainly can be taught to study.

The matter seems to be entirely a relative one. Primary children may be led to take the initiative in their tasks, and as we advance upward in the grades the pupils may be made more and more independent in their study. In the intermediate grades more may be expected than most teachers think. After the adolescent period is reached real initiative should be expected. The pupils should begin to judge relative values in the material studied and much independence should be allowed in forming conclusions.

The high schools and colleges, however, can do the most effective work in teaching to study. Here the pupils have

attained sufficient maturity to take the adult point of view, and the aim of the teacher should be to make initiative more and more independent. On leaving the school the pupil should feel that he is capable of gaining thought from books and other sources without the aid of a teacher.

In relation to this topic the general atmosphere of the school should not be overlooked. It brings in the spirit of co-operation and mutual esteem. But added responsibility rests upon the teacher. He should always aim to be a model in clear thinking, and he should not permit himself to wander into unrelated fields. The pupils also should be held to the point under discussion. Occasionally they should be asked what the question is that is being discussed.

To summarize: It has been shown that there is a definite pedagogical problem in teaching to study; that knowing how to study is of high importance in life outside of school; but that the problem is being largely neglected in current educational practice. The last point is especially evident from Miss Earhart's study.

In studying, the main thoughts should be sought out first, and the details and the subordinate thoughts should then be subsumed under them. Pupils should be taught to study from the time they enter the primary school, but more and more attention should be given to the matter as they advance upward in the grades, and more attention should be given to it in the high school and the college. Here the "how" to study becomes quite as important as the "what."

A Neglected Phase of Practical Education

R. T. HOUSE, PROFESSOR OF MODERN LANGUAGES, SOUTHWESTERN NORMAL SCHOOL, WEATHERFORD, OKLAHOMA

THE present generation, and the American portion of it especially, is nothing if not practical. If we leave our children in school for a large part of their lives, it is principally, and with a great many of us solely, because we believe that their productive power is more than sufficiently increased thereby to make up for the loss of time from actual production. Our utilitarian bent shows itself in the choice of subjects. The Greek professor is scarcely more than a memory; the study of Greek is little likely to give the student anything he can put to practical service in his coming business life. Latin has a somewhat tighter grip, for obvious reasons, but receives little attention compared to the favor accorded the sciences, manual training, and the multitude of "practical" subjects which the smallest schools are now compelled to offer. The tendency shows itself, again, in the manner of handling subjects. French and German, which a generation ago were very generally taught in much the same manner as the old classical languages, are presented now by the "natural" method, and an attempt is made to teach the student to speak, so that he may use the language across the counter a little later. The newer mathematics texts are crammed with problems taken bodily from the notebook of actual business life. The freedom of electives in the larger colleges gives this practical bent full play, and men take degrees nowadays without a speaking acquaintance with the subjects that formed the backbone of the old curricula.

But there is one direction in which this practical tendency shows itself scarcely at all. The American student is as unpractical in his sports as the most leisurely of old-time dreamers could well have been—more so, I believe, than most of them ever were. His indoor gymnastics are motions and contortions that lead nowhither; his tennis is purposeless, his baseball is a

business only with a somewhat undesirable element of the nation; his football is not even that. I am not saying, understand, that these motions and games may not be beneficial—that they may not, if properly applied, increase his strength, improve his health, afford him present enjoyment and a fund of future energy. I am merely suggesting that the reasoning that abandoned Greek, Latin, belles-lettres and the old "culture" studies, on the plea that culture and discipline may be obtained just as successfully from other studies which are more closely linked to adult life, may consistently be applied to the choice of sports. Spanish may be taught so as to give me a glimpse of a literature perhaps as worthy as the Greek, to train my memory and my reason as successfully as the Latin, and at the same time so as to give me a medium of communication which will increase my earnings when I take charge of my father's business. Very well; can I not in the same manner find a sport or a set of sports that will lead me to some more practical goal than the rather aimless amusements in vogue?

It is the opinion of the French sociologist, Marcel Prevost,* that such sports can be found, and his contention seems a very reasonable one. As the title of his article indicates, he looks particularly toward those exercises which tend to make a man a good citizen—which in M. Prevost's vocabulary seems to mean a good soldier. He is not pinning his faith so much to that very tiresome process of playing at soldier which makes so many of our military schools inapt and useless, and which process the most tolerant euphemism would scarcely venture to denominate "sport." He is advocating those practices which will "develop the physical aptitudes indispensable to the soldier: resistance to the fatigue of marching, skill in assembling and dispersing, . . . economy of energy in hand-to-hand struggles, skill at shooting, swimming, horsemanship, cycling, etc." As most of these accomplishments are as useful to the civilian as to the soldier, we may consider his suggestions as of very practical value.

It is prettily epigrammatic to assert that as soon as a sport is given a practical end it ceases to be pleasant and beneficial;

* "Jeux pour la Patrie," Les Annales Politiques et Litteraires, July 26th.

but is it always true? Are swimming, cycling, target shooting, less agreeable than golf or tennis, because they are more likely to be wealth-producing, labor-saving, life-saving? There is no more of the liberty that is asserted to be necessary to a healthful sport, in a well-regulated football game than there is in a rowing match. There is as much inspiration in a ride on a spirited horse as in the most cunningly contrived game of man's invention. A young football player of my acquaintance confided to me that he believes that a large part of football enthusiasm and interest is factitious, worked up because the young men are taught that it is "the thing" to play football and to like it; that he himself found football training worse drudgery than plowing corn, and no compensating pleasure or benefit in the games. What different line of argument could be brought to bear against the utilitarian sports?

The number of casualities from football games may be relatively small; but an article written as is this one, across the street from a young man who lies dead from an injury received in a football scrimmage, runs very naturally into a suggestion that so severely criticized a game might be replaced by some other form of exercise. Baseball, tennis, golf, have no such enemies, neither have they as much to recommend them. It is not possible for every college and high school, perhaps, to train a number of boat crews; but a great deal more might be done in this line than is done, on the lakes and navigable rivers. Every school can have its gun club, its old English hare and hounds, its boxing, fencing, cycling, wrestling, swimming matches—what else? Here is a wide field for the educational innovator, and one that has received little attention. What are the sports that combine pleasure, discipline and susceptibility of being put to practical use? How may current sports be modified so as to link them more closely to real life without dulling and deadening them? What are the possibilities in the line of new amusements and exercises that contain these desirable elements? It is not true that play, to be play, must be lawless and purposeless. It is true that the man who has an object in view in his hours of relaxation as well as during his work time, is healthier, happier, better and more useful than the idler.

Outlines of World Leaders

VII

Giordano Bruno: Knight Errant of the Modern World

ARTHUR DEERIN CALL, A.M., HARTFORD, CONNECTICUT

I. FIVE HUNDRED YEARS OF SCHOLASTICISM

Scholasticism dominant in Europe during the eleventh, twelfth, thirteenth, fourteenth and fifteenth centuries. Valuable contributions of the scholastics; their limitations. The rise, decline and renewed appearance and promise of the Renaissance in Italy; the emphasis upon authority however, productive of great intolerance. Martyrs to science at this time inevitable, especially in Italy.

II. THE BIRTH AND EARLY ITALIAN CAREER OF BRUNO

Born in Nola, near Naples, 1548; influence of this wild, romantic environment. Sought an education by joining the Dominican order at Naples when about thirteen years of age. Enthusiasm for nature and the dualism in his own life. Sought relief in religion. His scholarship. His "heresies" and flight through northern Italy.

III. WANDERINGS BEYOND ITALY

He fled to Geneva; obliged to leave after two years. In Toulouse. In Paris in 1579. Teachings about the soul, the sphere and the memory. His comedy, "Il Candelajo." The significance of the "De Umbris Idearum." Protegè of the French ambassador in England about two years. His side lights on the life of Elizabethan England. Acquaintance with Sir Philip Sidney, Francis Bacon and other great persons of the time. Disputes at Oxford. The publication of "The Ash Wednesday Evening Conversations," "On the First Cause," "On the Infinity of the Universe and of Worlds," "The Expulsion of the Triumphant Beast." Returned to Paris 1585. At Marburg, Wittenburg, Prague, Helmstadt, Frankfort. Other publications.

IV. THE FATAL RETURN TO ITALY

Giovanni Mocenigo's invitation, the unsuspecting acceptance and the inevitable rupture between them. The arrest, trial and "recantation." Six years of imprisonment. "I ought not to recant, I will not recant." . . . "It may be that you fear more to deliver this judgment than I do to hear it." . . . "I die a martyr, and willingly." He was burned February 17, 1600. His statue in Rome in 1889.

V. THE MISSION AND TEACHINGS OF BRUNO

The search for unity. Messenger to a larger world from the dying Renaissance in Italy. The influence of Copernicus and others upon Bruno. His view of infinity strictly modern. He foresaw the law of the conservation of energy. His conception of good and evil the generally accepted theory of our time. He saw the necessity of grounding belief upon a comparative study of religions. By identifying mind with being he became the forerunner of Descarte, called the father of modern philosophy. By his theories of a rational pantheism, of an imminent God, of the distinction between natura naturans and natura naturata, he laid the foundations for the teachings of Spinoza. His notion of monads and of a pre-established harmony in the universe voiced the fundamental theories of Leibnitz. His doctrine identifying the real and ideal became later the message of Hegel. Bruno's life was one of the "successful failures" in the history of thought. His chief appeal to our time, however, is not so much that he was in advance of his age, but that he went to death nobly, supported by no party.

VI. CONCLUSION

Discussions about Giordano Bruno have been various and often venomous. He has been condemned by both Protestant and Catholic ecclesiastics. He was burned at the stake as a heretic. It must be confessed that there was about him a violence, a pompous self-esteem combined with a strange mixture of buffoonery and bitterness which alienated him from his world. The intolerance and the authority of his day, against

which he struggled with such zeal, was more than he could withstand. Like Faust and Paracelsus he mistook certain charlatanries for truth. Yet his conception of infinity as a correlation of things, his enthusiasm for nature, his emphasis upon the spirit of the law, his philosophy of becoming, of optimism, of investigation, of tolerance, of the divinity of the human intellect and of the even greater divinity of life, this was certainly in advance of his time. He looked upon the aim of all progress as the perfecting of the human soul. For him progress must develop, not out of dogma and speculation, but out of evidence founded upon fact. He recognized no morality not founded in intelligence. His uncompromising insistence upon the freedom of the mind, upon the pursuit of truth unimpeded by creeds, upon the superior dignity of the conscience over that of the priest as the arbiter of right and wrong, upon the infinity, unity and rationality of the universe, these place him as the expression of the aspiration of modern Italy, indeed of the modern age. This is why, June 9, 1889, the century which he divined reared and dedicated his statue on the spot where, three hundred years before, he was killed, a martyr to the human intellect.

REFERENCES

Life of Giordano Bruno, I. Frith; Renaissance in Italy: The Catholic Reaction, Vol. II, Chapter IX, J. A. Symonds; The Edinburgh Review, July, 1887; Biographical History of Philosophy, Vol. II, Lewes; Giordano Bruno, Brinton and Davidson; The Heroic Enthusiasts, Giordano Bruno. Periodical literature also contains many articles relating to Bruno.

A Problem for Boys' Boarding Schools

BY "DOMINIE"

[NOTE.—For reasons which seemed good and sufficient the author preferred to withhold his name in connection with this article. The article itself seems to be of interest and value, and is, therefore, given place in our pages, although under a *nom de plume.—Editor*]

A GREAT problem in the administration of boys' boarding schools is that of securing a permanent staff of competent teachers. Teachers that become fixtures in such schools should of course be able to marry, and to marry they must be assured of a respectable income, a comfortable home and sufficient means to educate their children. They should also be able to look forward to a pension large enough to support them when their usefulness as teachers is past. Moreover, the married teachers cannot all live in the boarding houses with the boys, desirable though it is that some of them should do so in order that the good result of their experience when they were unmarried teachers may not be lost. For one of the most important concerns of boarding school management is the care of the manners and personal habits of a lively crowd of boys living under the same roof. Their natural tendency to careless language, slouchy appearance and uncouth behavior in general needs tactful and firm control.

The course of some teachers is as follows: They begin to teach as soon as they are out of college, and spend several years in a boarding school learning how it is managed. During these years they are very closely in touch with the boys, and they often put on the baseball or football uniform. Having been taught by the older teachers, and especially by the principal, how to discipline, and how to instruct, they begin to feel settled in their vocation, and therefore seek to marry and make a home in the institution with which they are connected. If they are allowed to do this they become part of the permanent

experienced staff, and help to give the school its special character.

But there are often other young teachers at such schools who have come straight from college, some of them quite doubtful as to what calling they shall finally choose, others with their minds made up to enter the legal, or the medical, or some other profession after teaching a year or two. These young men often show ability, and give high promise of becoming good teachers, but the first year or two is always a period of experiment, and the boys get experimented on. Then, perhaps, just as a young teacher of this kind has really learned to do his work well he leaves the school in order to enter his chosen profession. Another raw recruit takes his place, and the boys have to get used to his methods, and be the subjects of his experiments. Besides these young college graduates there are also other men, often of some experience, who teach in a school for a longer or shorter (usually shorter) period, and then leave for better positions either in teaching or some other occupation.

It is this continual changing of teachers that is so bad for a school, and if there are many new teachers each year, as there are in some schools, the case becomes serious indeed. A school may have a fine plant, but without good teachers, and some continuity of method, it cannot prosper indefinitely. When popular and capable teachers leave, the boys justly complain. They know more than the new teachers about the way things should be managed, and often in the early part of the school year they try to discover by a sort of hazing process what these teachers are good for. The result is much unrest, much experimenting, often many mistakes and considerable friction before the school settles down to work and good order. Such a condition is very hard for the principal, however competent he may be.

Nor are the principal's difficulties limited to what happens in the schoolroom and the boarding department. He has to pacify inquiring parents who have listened to their boys' complaints. These parents pay a considerable sum for the education of their sons, and expect the best care and instruction for them. On looking into the cause of the discontent they often

find that there have been so many changes in the teaching force, and so many new or inexperienced members added to it, that the machinery of the school has been sadly strained, and even rendered temporarily ineffective.

The chief cause of these difficulties lies deeper than most people suspect, for it is in the failure of the parents themselves and the trustees of such schools to estimate correctly the cost of a good education and its numerous important factors. Furthermore, they fail to realize how much actual money it is worth to have well-trained, well-bred, well-informed and self-reliant boys turned out by these institutions.

To enlarge the subject so as to take up for a moment public schools as well as boarding schools, most people rightly believe that our public schools have been the foundation of our national efficiency; they point proudly to handsome and spacious school-houses, splendidly equipped with laboratories, maps, pictures, sculptures, and the latest devices for hygienic heating and ventilating. It is a fact that the American people firmly believe that they have an adequate school system which is perhaps better than that of any other nation. But, notwithstanding all this, there are many parents, especially in cities, who for various reasons have to send their children to boarding schools, where they pay large sums in addition to what they pay to the public school fund by way of taxes. These parents believe that they are getting peculiar advantages which no day school, public or private, can give. They and the community at large who patronize the public schools are convinced that the educational experts, to whom they intrust the education of their children, are giving them all that is required.

It is this wide-spread belief in the efficiency of both public and private schools that has shut the eyes of most people to a serious defect in our educational system—the proportionately small number of men of ability that are permanently engaged in teaching and the difficulty of getting even these. It is a fact that for lack of even a decent financial reward most of our enterprising and able young men spurn the profession of teaching for one more lucrative. A good education—one that is worth money and satisfaction to its possessor—is more dependent

upon a large supply of good teachers than upon mere material equipment, and in these days of innumerable opportunities it takes at least money enough to assure a man of a comfortable home and agreeable associations to induce him to become and remain a teacher. Now, our boys and girls are not getting such an education as they should have, and one of the causes is that we have not enough highly trained and educated men of ability doing their part in the teaching profession. The importance of this fact cannot be overestimated.

Till lately at least, parents have not co-operated with the public schools closely enough to see this necessity of improving the power of the teaching staff by giving greater opportunities to those who are already members of it, and by attracting larger numbers of able men into it—which must be accomplished by spending more money for teachers. That is, parents have not realized that good teachers, like good lawyers and good business men, cost money. But now business men and manufacturers have begun to realize that the output of our schools is not as efficient as it should be, and they are therefore organizing committees, commissions on industrial education, etc., to see what can be done. They see that something is lacking. It has been borne in upon them that the money value to them of a boy's education will be greater when the boy can come from an industrial training course directly to an occupation where his work is worth something—in short, that a boy's education is a marketable asset. This kind of practical education people are beginning to understand the advantage of. It is harder to recognize the money value of the more general, cultural education, which depends so much more upon the teacher than upon the curriculum. But even here, if one looks more deeply, he will quickly be convinced that there is such a value to a thorough training, not only in the acquirement of information, but also in the resulting perseverance, clear thinking, obedience, promptness and truthfulness. Young men of such qualities are in demand everywhere.

The money value of the output of private boarding schools is perhaps even less readily seen because the education begun there is not finished and put to the test of competition in the

world till after graduation from college. (Some may say that a lack of value is apparent when the father has to pay a private tutor to "cram" his boy in the long vacation in subjects where the school has failed.) And yet in a marked degree is the character of a boy necessarily affected in a boarding school where for nine months in twelve he spends his time away from home influences. In such a school, where the circle is by nature rather small, and where the teachers live in the houses with the boys, and try to act *in loco parentis*, it is of the very highest importance to have teachers of insight, experience and firmness, who will insist that the boys' personal habits and manners shall be correct in all particulars, and whose influence shall be to inculcate truthfulness, a clear perception of the difference between right and wrong, courage, justice, courtesy and reverence. They should also be able to extend the interests of the boys beyond their daily lessons and their athletics. Such an education is worth far more than money, but it is also worth money. The fact that private boarding schools have much difficulty in getting as many teachers of this kind as they need, together with the fact that in Massachusetts out of some 13,000 teachers only about 1,200 are men, is enough to show that most men of energy go into occupations where the financial rewards are better proportioned to the work than in teaching.

Of course it should not be inferred that great rewards are always necessary to induce men to choose teaching as a profession. To disprove that such is the case it ought to be enough for the reader to recollect even a few of the many men of splendid character and ability who have been teachers. Indeed, if the rewards of teaching were equal to those of some of the other professions or to the rewards gained in industrial and commercial enterprises, it is likely that many persons, of great ability, perhaps, but yet not endowed with enough of the missionary or preaching spirit to make the best teachers, would enter the profession merely for what they could get. The best teachers are those who have something of such a missionary spirit, and who teach for the love of helping and giving, not of getting. The point is that at present many young men at the

outset of their careers are prevented from following teaching as a profession because they cannot see in it even a comfortable future for themselves and their families. Hence the schools must lack their services. These young men would prefer to teach and they believe they could teach well, but they hesitate to follow a calling the work of which is so confining and the pay so small that they would have to deny themselves the advantages of travel and many other refining and cultivating influences, not to mention the peace of mind that accompanies certain tenure and a not immoderate degree of comfort. And so a great deal of missionary spirit that would be so welcome in the teacher's profession, goes first into law, or medicine, or business, and then after acquiring sufficient means expresses itself—very nobly, too—in social, political, philanthropic or other kinds of service for the public good. The trouble is—it cannot be stated too often—not that there are not enough young men, clever and able, who want to teach, but that we do not know enough to demand their service and pay them for it; and we cannot get it unless we do pay for it. It is a great pity that such men are lost to the teaching profession.

In our boarding schools, therefore, it seems as if the principals should not always be held responsible for the unsatisfactory conditions that often obtain. Sometimes a principal considers thirty or forty candidates and corresponds with several colleges and agencies before he can find sufficiently promising men to fill two or three vacancies. Principals usually make every effort to secure a permanent staff of highly trained teachers. In almost every boarding school there are several such teachers who stay because they do get a fair reward, as teaching goes, and who sometimes have a small private income besides. But on account of lack of funds the principal cannot offer an equal reward to the newer teachers. The responsibility, therefore, for the lack of competent teachers must rest, sometimes at least, partly on the patrons and the trustees, and they must share the blame if the conditions and the results are unsatisfactory. They should see to it that not only is the plant what it ought to be, but also that the personnel of the staff is so; and they should spare no effort to provide means for getting the best and ablest men to be permanent teachers.

There are many examples of the generosity of patrons of boarding schools when a new building, a gymnasium, an athletic field, additional laboratory equipment, or, in general, an increase or an improvement to the plant is needed. All these things are good, and they give at least the appearance of prosperity to an institution. Trustees, also, are often ready to enlarge the visible resources of the plant. But, strangely enough, the instances of endowment funds for teachers' salaries and pensions are rare indeed, notwithstanding the fact that just such endowments are more needed than anything else to give pemanency, character and strength to the teaching force, which are of vastly more lasting benefit to the pupils than the mere improvement of the material equipment. Such endowment funds would be of great help to the schools because they would enable teachers who like the community life of a boarding school to keep up intimate and almost family relations with the boys by giving these teachers the opportunity to live in suitably arranged houses with their pupils, or in closely adjacent houses of their own. They would insure certainty of tenure, so that the teachers could interest themselves in local affairs and take part in them if necessary, thus keeping out of ruts. A teacher would know that if he proved himself capable, he would be assured of a good salary, a good home, a permanent position, a useful life in the community, and a pension after a certain term of service. Thus, with advancing years, he would not have the uncomfortable feeling that he was clinging for self-support to a position which could be better filled by someone else, and, also, the principal and the trustees would not suffer embarrassment in asking for his resignation.

To sum up briefly, it is clear that the great need of boarding schools is that the teaching staff be made permanent and that the best ability be attracted to it. To accomplish this, endowment funds for salaries and pensions must be obtained. To obtain these is the duty of patrons and trustees, who can thus serve the cause of education and benefit the state.

Schoolday Blunders

BEN R. WINSLOW, MT. RAINIER, MARYLAND

THE inability of the mind of growing children to retain more than a fragment of their tutor's instructions is evidenced in the little blunders we all have made when called upon to answer questions. Facts, their answers show, have been retained, but they have not been properly classified in the mind and, therefore, when the student seeks to use them he finds them somewhat disassociated and his answers become a trifle mixed. Especially is this true of the young student of the Bible. There are too many characters, and the facts concerning them are entirely too numerous for his undeveloped mind to classify. Therefore, we are not surprised to learn from one youngster that Moses was an Egyptian who lived in an ark of bullrushes, kept a golden calf, and worshiped brazen snakes, and "ate nothing but kwales and manna for forty years," or that he was caught by the hair of his head while riding under a bow of a tree, and was killed by his son Absolom as he was hanging from the bow.

To the question, "Who was Jonah?" one lad replied:—

"He was the father of Lot and had two wives. One was called Ishmael and the other Hagher; he kept one at home and he turned the other loose in the desert, and she became a pillow of salt in the day time and a pillow of fire at night."

"What did Moses do with the tabernacle?" was asked by another Sunday-school teacher, to which one boy replied that he chucked it out of the camp. The teacher, in surprise, asked him where he obtained this information, and the boy promptly quoted the first sentence of the seventh verse of the thirty-third chapter of Exodus: "And Moses took the tabernacle and pitched it without the camp."

Another lad informed his teacher that Elijah was such a good man that he went to heaven without dying, and that while he was going up he threw his coat down for Queen Elizabeth

to step on. "Esau," he said, "was a man who wrote fables and sold the copyright to a publisher for a bottle of potash."

The blunders of youth are not, however, confined to sacred history, as these answers, vouched for by the several teachers who have saved them to posterity, will testify :—

"Tobacco was introduced into England by Sir Walter Raleigh, and as he sat smoking a pipe he shouted: 'This day, Master Ridley, we have lighted such a fire as shall never be put out.'"

"The reign of Queen Ann was the time in which the Spanish Armanda took place. She married Philip, of Spain, who was a very cruel man. The Spanish and English fought bravely against each other. The English wanted to conquer Spain. After several battles were fought, in which hundreds of English and Spanish were defeated, they lost some very large ships and were at a great loss on both sides."

"Wolsey was a famous general who fought in the Crimean war, and who, after being decapitated several times, said to Cormwell, 'Ah, if I had only served you as you have served me I would not have been deserted in my old age.'"

"The Homeric poems were not written by Homer, but by another man of the same name. Gorilla warfare was when men rode on gorillas. The puritans found an insane asylum in the wilds of America. Johnson died from a chronic disease —there was something the matter with his chrone."

The class in geography has furnished these choice blunders:

"In Austria the principal occupation is gathering Austrich feathers."

"Ireland is called the Emigrant Isle because it is so beautiful and green."

"A fort is a place to put men in and a fortress is a place to put women in."

"Climate lasts all the time and the weather only a few days."

"The Nile is the only remarkable river in the world. It was discovered by Dr. Livingston, and it rises in the Mungo Park."

"Constantinople is on the Golden Horn; a strong fortress; has a university, and is the residence of Peter the Great. Its chief building is the Sublime Porte."

Examination Questions for Last of the Mohicans

MAUD ELMA KINGSLEY

1. Enumerate the best known works of fiction contemporary with THE LAST OF THE MOHICANS. How does THE LAST OF THE MOHICANS differ from these in subject and in literary execution?

2. What is the name of the series of which THE LAST OF THE MOHICANS is a part? Give the meaning of the name. Give the title of each novel comprising the series, and state the significance of each of these titles.

3. Describe fully the American Indian of Cooper's tales. What other American writer, in a widely known literary production, has also idealized the American Indian?

4. During what period of our country's history is the scene of this story laid? What information does the text give you in regard to (1) the condition of the country at this period; (2) the character of the war then in progress; (3) the part played by the Indians in this war?

5. Enumerate the characters of the story in the order of their appearance. Identify each, state the circumstances under which each is introduced to the reader, and describe the condition of each at the close of the story.

6. Describe the civilization of which the Scout is the product. Show by citing anecdotes from the story that the Scout possesses all of the traditional characteristics of the class of which he is a type. How does the Scout rank among the characters of fiction?

7. To what extent, in your own opinion, has Cooper influenced the popular conception of the pioneer, the scout and the American Indian of our Pioneer Age?

8. What motive instigated each of the following conspicuous features of the story? (1) Magua's treachery and subsequent action; (2) the zeal of Uncas in the rescue of the sisters; (3) the devotion of Heyward throughout the story; (4) the fidelity of Gamut; (5) the watchful care of the Scout.

9. Describe the manner in which the actors concerned are extricated from the following situations: (1) Heyward's party lost in the woods between Forts Edward and William Henry; (2) the Indian attack on the party concealed in the cave; (3) the capture of the Heyward party by the Indians; (4) the imprisonment of Alice among the Hurons; (5) Uncas at the stake.

10. Which of the two sisters is the heroine of the story? Give reasons for your answer.

11. Describe Tamenund and the part played by him in the plot development of the story.

12. Enumerate those scenes of THE LAST OF THE MOHICANS which seem to you most tragic and thrilling. Describe in full two of them.

13. Make a list of ten illustrations for the novel, enumerating all the details which should enter into the composition of each picture.

14. Describe from an historical standpoint the Massacre at Fort William Henry, as it is recorded by Cooper.

15. Would the story have been as satisfactory had the Great Fight terminated less disastrously and had Uncas and Cora not been slain? Give reasons for your answer.

16. What impression did Magua, Gamut, Uncas and the Scout make upon you when you met them first? When did you receive the first intimation of the treachery of Magua?

17. What important part does Gamut play in the development of the plot? Why was he allowed to roam about at will when he was in the hands of the Indians?

18. Write a paper on the subject: "Manners and Customs of the American Indian of the Pioneer Age," drawing your material from THE LAST OF THE MOHICANS.

19. To illustrate the picturesque speech of the Indians, paraphrase the following. State the circumstances under which each statement is uttered: *Your fathers came from the setting sun; mine from the red sky of the morning. Does not this stream run toward the summer? I am on the hilltop and must go down into the valley. Did Magua say that the hatchet was out of the ground, and that his hand had dug it up? The tomahawks of your young men have been very red. The singing birds have opened their bills and Tamenund has heard their song.*

20. Uncas presents himself to the reader throughout the course of the story in a series of dramatic situations. Describe each.

21. Identify *La Longue Carabine*, *Le Cerf Agile*, *Le Reynard Subtil*, *Le Gros Serpent*, *The Open Hand*. Give the reason for each title.

22. What is the significance of the name, *Last of the Mohicans?* How is the proper noun of this title pronounced? What is the plot of the story? Show that this plot is suggested in chapter ii and fully revealed in chapter xi.

23. Prove that Uncas, and not the Scout, is really the hero of the story.

24. Show that THE LAST OF THE MOHICANS is unevenly written. That its chapters are either of dramatic intensity, or else they are commonplace in the extreme. Criticise the character-drawing in the sisters.

25. Mention those facts in the life of Cooper which fitted him especially for the production of such a work as THE LAST OF THE MOHICANS?

Editorial

GOOD young men and women with brains, ideals and culture are always in demand in every business and profession, but nowhere more than in the teaching profession. With all due respect for our normal schools, with their admirable faculties and their splendid facilities for giving instruction in the principles of education, we nevertheless fear that they have made it too easy for a multitude of young women of estimable character and commendable intentions, but with no particular qualifications for the highly specialized work of teaching, to get into this profession. We fear that many are in it without any realization that it is a profession, without any profound grasp of its fundamental principles, and without any idea of staying in it longer than is necessary to make it a stepping-stone to something more attractive and permanent and promising larger material rewards. If these fears are well grounded they indicate a weakness which must prove a serious handicap on the development of the profession and the attainment of the highest results of public instruction.

Is not the spirit that pervades the teachers' college a type of the true standard of a training school for the profession of teaching, whether in the higher or the lower grades? The teachers' college seems somehow to mean something more than the normal school; it seems to suggest a higher standard, an atmosphere of scholarship, a flavor of professionalism in the best sense of the word. We think of the teachers' college as not so overwhelmingly feminine as the normal school. We think of it as a place where there are the scholastic standards of the college and the university, where there is the free interchange of intellectuality, the give-and-take of minds that are supremely interested in the pursuit of truth for its own sake, and who believe that theory precedes practice and that the science of a thing should be mastered before undertaking the art. Are we not coming to look to the teachers' colleges rather than to the normal schools for our best teachers? And if so does not this very fact indicate the dangers above suggested?

It would be interesting if some one should gather some comparative statistics upon the subject. How large a percentage of the graduates of teachers' colleges during the past ten years are still engaged in teaching? What are their average salaries? How permanent have been their engagements? How do they compare in these respects

with a similar number of contemporary normal school graduates? Another line of comparison, as to the reading of the two classes of students, might be suggestive. The librarians of a given normal school and teachers' college, reporting upon the books and professional periodicals called for during the year 1908 by their respective students, would furnish important data for the solution of the question.

If there are weaknesses in our normal schools as at present administered we are sure they can be corrected. The normal school has its place in the educational system. It has done splendid work in the past. It will do a still larger work in the future. Its true friends are those who without fear or favor face the actual situation, and who, if weaknesses are found, growing out of the adoption of new standards and the coming in of changed conditions, shall suggest and put into operation the appropriate remedies.

THERE is a position which is instinctively taken by a high-minded child which should be respected by his parents and teachers, and against which he should never be required to act—in a manner that will violate his natural and commendable feelings. It is the case wherein it is suggested to him that he become a spy and a telltale upon his schoolmates. We believe that the normal child shrinks from this, not solely nor chiefly because he fears the taunts and reproaches of his comrades; but it is because as a social being he has a deep inherited consciousness of the rights of others and an intuitive perception of the meanness and contemptible priggishness of espionage. When we attempt to spy upon others, with suspicion and a determination to find them out in wrong doing and to expose them, we are on exceedingly dangerous ground. We are probably opening our own souls to the inroad of some of the basest qualities of depraved human nature. It is a compliment to the unsullied mind of an unspoiled child that he shrinks from any and every such abyss. It is little less than an outrage to require him to do anything which is so repugnant to all that is highest and noblest within him.

The teacher who respects this feeling, which every teacher is practically sure to find active among the better class of her pupils, will be the one who by her own personality will exert a wholesome influence for order and good behavior in school, which will render such espionage unnecessary. The teacher who is obliged to ask the co-operation of her pupils in ferreting out misdemeanors thereby advertises her own incompetency. The school is a little world in which about the same general sentiments and standards prevail that are to be found in

the larger world of adult life—only the school is a good deal more natural and unspoiled world—closer to the heart of truth and reality, less artificial and warped by the constraint of tradition and custom. In the school as in the world at large the most powerful ally of good order and righteousness is public sentiment. This the teachers and parents should foster most carefully. And nothing will help more to develop and conserve a just, well-balanced and effective public spirit in the school than a distinct perception by the pupils that their individual, personal rights are highly regarded and carefully respected by both teachers and comrades.

When a pupil finds that he is being spied upon by the direction of his teacher and that the detective is one of his fellow-pupils he almost inevitably shrinks back into his own shell, separates himself from the community of interest of the whole school, becomes a law to himself, no longer counts upon the side of public law and order. Untrustworthiness is begotten of lack of trust, and we have the criminal and the outlaw in the making. For the sake, then, of the youth who instinctively shrinks from being a spy upon his comrades, for the sake of the good order and high moral and spiritual tone of the school, and for the salvation of the pupils who have, perchance, done wrong, but who may be won back to virtue, let us guard against requiring detective service of any boy or girl in our public schools.

APROPOS of the recent quickening of interest in the great career of that great American, Abraham Lincoln, we take pleasure in calling attention to the existence and objects of the Lincoln Educational League, a social organization composed of persons interested in perpetuating the fame of Abraham Lincoln, in inculcating his principles and patriotism in the minds and hearts of his countrymen, and particularly among the rising generation, in order to inspire them by his example to loftier ideals and nobler practices of the rights and duties of American citizenship. Any person approved by the Board of Directors may become a member upon application and upon paying a membership fee of five dollars. The members elect annually a president, a vice president and a secretary-treasurer, who constitute the board of directors, who have general charge of The League's affairs. No salaries or other compensation for services are paid to any officer. The annual meeting is held in the city of New York in the third week in March of each year. The League has provided a fund of $20,000 to be used in placing bronze tablets bearing the full text of Abraham Lincoln's address at Gettysburg, in educational

institutions throughout the country. Arrangements have been made to supply a regular $60 tablet for this purpose at $40 net cash. The fund is to be used in paying one half of the price of each tablet, making the net cost to the institution only $20. Any public school, college, public library, Y. M. C. A., Y. W. C. A., or other educational institution of a public character may avail itself of this offer. The fund will only be applied to supplying one tablet to each institution, but there are no restrictions as to the number of institutions in any locality applying for them. In every case the tablet is to become the property of the institution, and to be permanently erected therein. Any institution wishing to obtain one of these tablets, which will be a perpetual object lesson in patriotism and highmindedness to the pupils and a reminder of the value to the world of the life and character of our great martyred President, should address The Lincoln Educational League, 38 Twenty-first Street, New York, N. Y.

EVENING schools have fully demonstrated their usefulness and their necessity. The state has awakened to its responsibility to furnish evening instruction to the large class of persons who are willing and eager to receive it, but who cannot avail themselves of any other form of public instruction. The evening schools are quick to adopt the latest ideas in school work, and they have readily accepted the suggestion of the value of industrial training. This appeals in a practical way to the great body of mechanics and other industrial workers, who perceive that through instruction by competent teachers they may acquire greater skill in the use of tools and the power of earning higher wages. The question of teachers is a serious one, but is finding its solution in one way or another. In many instances foremen and other skilled workers are found who will give part of their time to this work. Mr. Arthur D. Dean, chief of the Division of Trade Schools in New York State, thinks that "day school teachers are employed too much at present in evening schools." "The only people competent to teach in our evening industrial schools," according to this authority, "even on the book side, are the men and women who know from their contact with modern industrial and commercial life vital points of interest which concern these workers who come to the evening schools to meet definite needs." Summing up the situation in New York, he says: "At present the cities of New York and Buffalo are conducting evening schools of the mechanical trades, making use of the shops, equipment, and some of the teachers of the day technical high schools. Additional teachers

are selected from the various shops. Classes are organized in machine shop practice, in plumbing, in pattern making and other wood work, in mechanical drawing, in shop mathematics, in electricity, and various other trades. The courses laid out for these several departments are as thorough and complete as it is thought possible to make them in an evening school. The attendance upon these schools is very large and remarkably constant, being better than that in most night schools. The object of these schools is mainly to give men already employed in the trades, who know, therefore, at least a part of the trade in which they are employed, an opportunity to broaden their mechanical training and make themselves more efficient workmen."

PRESIDENT ROOSEVELT'S little son, when a lady, who was surprised that the President should send him to the public school, asked him if he did not meet all kinds of boys there, is said to have replied, "My father says there's tall boys and short boys, good boys and bad boys, and there ain't any other kind of boys." This is a complete statement of the democratic spirit of our public schools. There may be, as one teacher states is the case in her school, children whose parents engage in eighty-six different occupations, and in whom are bred the traits of twenty different nations; but the American public school knows no differences between them save those that depend on individual personal characteristics and behavior. All have the same chance and are treated with the same consideration. The object kept in view is the same for all, namely, to make them into good, intelligent, useful American citizens, and to put within their reach life, liberty and happiness. Truly the work of instructing and guiding and moulding this great heterogeneous mass of humanity is the most stupendous and the grandest task that is recorded on the pages of human history.

Foreign Notes

ENGLAND

The failure of the third education bill brought in by the Liberal party has caused serious concern to thoughtful men of both parties, who place public welfare above partisanship. The sincerity of the effort to reach some working basis in this matter is shown in the recent appointment by the primate of an official committee of advice to deal with the subject. Dr. Sadler is the chairman of the body which is termed officially the Education Settlement Committee.

WALES

A conference was called in Wales, January 21st, to consider the drafting of a bill providing for a minister and council of education to deal solely with the problems of education in that division of the kingdom.

The first free municipal secondary school in Wales has just been opened with appropriate ceremonies at Merthyr Tydfil.

IRELAND

The names of the two new Irish universities are settled upon. The one to be founded in Dublin will be known as the National University of Ireland and the other that of the Queen's University of Belfast.

The first meeting of the senate of the National University took place on December 17th, when Dr. Walsh, the Roman Catholic Archbishop of Dublin, was unanimously elected chancellor.

A determined effort is being made through the country, to secure that the new university in Dublin shall recognize and give due place to studies that are distinctively Irish, and pertain to the language, history and traditions of the country. Resolutions to this effect have been sent up not only from the Gaelic League branches, but from many of the local councils and organizations throughout Ireland, and from the National Teachers' Executive Committee.

The Commissioners of National Education have recently appointed Miss M. B. Pye, B.A. (R. U. I.), a member of the staff of St. Dominic's Training College, Dublin, a junior inspector of national schools. This is a new departure for Ireland.

FRANCE

Interest in spelling reform has revived in France. A scheme has been prepared for the consideration of the superior council of public instruction, embodying the reforms proposed in 1893 by M. Gréard as modified later by the Academy. The changes proposed will be sanctioned but not made compulsory.

The annals of education present few events of greater interest than the ovation to M. Émile Levasseur on the eightieth anniversary of his birth. The ceremonies which took place at the Collège de France were conducted by representatives of the college, of the Academy of Moral Science, of the Conservatoire des Arts et Métiers and of the School of Political Science. Dr. Levasseur has not only been identified with all the institutions named, but what is still more remarkable, he is still actively engaged in their service. Moreover, by his published works he has placed the students of all nations under obligations which they freely admit. His exhaustive investigation and scientific exposition of the subjects which engage his attention are illustrated by the two monumental works—La Population Française and L'Histoire des Classes Ouvrières.

Of the addresses delivered at the anniversary celebration none was more interesting than that of M. Levasseur himself, who, responding to the congratulations of his colleagues, passed in rapid review the recent history of the institutions they represented, every one of which, by its foundation or recent development, illustrates some great intellectual movement of the times. The brilliant exercises of this fête day were crowned by the presentation to M. Levasseur of a medallion portrait, executed by the celebrated artist, M. Chaplain.

BOHEMIA

Prague is the only one among the capitals of Europe that possesses two universities absolutely equivalent. Both are derived from the university which was founded in 1346 by the Emperor Charles IV. At that time Latin was the universal language employed in instruction, and all students stood alike in this respect. In the fifteenth century the rivalry between the four nationalities represented at the University of Prague, namely, the Slavs, Poles, Bavarians and Saxons, became intense. The great reformer, John Huss, was also the intrepid champion of Slavism, and through his efforts a decree was issued ordering that, in university matters, three votes should be allowed the Slavs for one to students of other nationalities. As a consequence, a great body of German students and professors deserted Prague, and founded the University of Leipsic. After the triumph over the religious reformation the Latin language, as the instrument of instruction, gave place to the German. In 1793 a chair of Slavic language and literature was founded. From this small beginning the use of the Slavic language in the university rapidly increased, and in 1881 the decree was promulgated, creating two distinct universities

The relative importance of the two may be inferred from the latest statistics which pertain to the year 1906–1907. According to these, the German university had 1,610 students and an appropriation of 1,448,291 crowns (about $289,600). The Slavic university had 3,961 students and an appropriation of 1,680,332 crowns (about $336,000). It is noticeable that the excess of Slavic students over the German is very much greater than that of the appropriation for the service of the former as compared with the latter.

A. T. S.

The Readers' Forum

[The editor wishes this department to be absolutely free and open for the expression of honest opinions, the asking of questions or the relation of experiences. He does not hold the magazine responsible for utterances on these pages; but asks that contributors shall bear in mind the real good of the cause. Please sign your communications exactly as you wish them to appear in print. The editor will add simply the name of the state from which the contribution comes.]

To the Editor of EDUCATION:—

Speaking of the salary question, I do not blame superintendents and other men teachers for accepting the good that comes their way, but I do think that if they would try it courageously, they could help the women to secure higher salaries. This is especially true since they generally have the ear of the school boards, while the women must not bother these august gentlemen, or if they do, stand a good chance of losing their jobs.

Now it seems to me that there is no reform in the whole line of educational matters so pressing as this of paying women teachers what is righteously due them. What value do parents put on their children when they will send them to a teacher paid a lower wage than the hired man who feeds the stock?

I know something of the conditions of teaching in five states—Kansas, Missouri, Iowa, Illinois and Colorado. I have taught in three of them, in small towns and in the country. In all these rich states they raise cattle, mules, horses, corn and apples, the very best of their kind in each line. Here in this beautiful valley men spare neither time nor money nor expert labor in producing the very finest apples and peaches. Their work is scientific in its accuracy and skill. Fruit raising is almost a profession, and it pays to have it that way. Here, too, they pay their teachers somewhat fairer salaries than in the other states I have mentioned. Still the pay is not in proportion, nor such as ought to be paid for the service given.

I get $630 a year; I have a family of three to support, and living expenses are very high on this western slope of the Rockies. After ten years' work I took last summer a vacation trip to the Pacific Coast. I was ill, and needed the change. It cost me $200. I don't know when I am going to recover financially from that trip, certainly not this year. It was my first vacation trip, and seems likely to be the last. I cannot, as a general thing, attend summer schools, although my tastes run strongly that way. I cannot travel. I cannot even afford the professional and other literature I should like. Now, honestly, can I do the same for the little children I teach that I could do if these restrictions were not upon me? Should I not be a more valuable teacher if I could afford a more liberal life?

One year in a North Missouri town I taught an eight months' term at $40 a month. I was a State Normal graduate, stood high in my class, and was a teacher of three or four years' experience. I had to send money home; alas, it was very little; but that year I was cold, because I couldn't buy the coat I needed, and the winter was so long and bitter. I was none too well fed, either, for the family with which I boarded were not liberal with table fare, and I could not afford the fifty cents a week it would have cost additional to stay at the hotel. Now do you think that people who keep down their teachers like that have any conception of the value of children? Of course I know these conditions are a survival of ancient wrong, and will perhaps improve, but we Westerners like things to take a move once in awhile, and isn't it about time?

The public owe a decent teacher whom they employ enough to live on and to support her old mother in the style in which other respectable cultured people live; enough to put away something for old age; enough to take a vacation trip once in four or five years; enough to pay for literature, music, lectures and some social pleasures.

A cramped, niggardly life cannot inspire childhood. A half-paid person cannot keep the respect which is the necessity of every teacher.

We are in touch with the children; superintendents are not. We are the very soul of the teaching profession.

G. V. S.

Colorado.

To the Editor of EDUCATION:—

Apropos of the discussion going on in The Readers' Forum, particularly with reference to the study of foreign languages in the public schools, the following rule, in operation in the Milwaukee public schools, is significant:

Instruction in the German language will be given in all the grades between the kindergarten and the high schools. It will be assumed hereafter, as classes are formed to begin this study, that parents wish their children to study German unless the parents notify the principal of the school to the contrary. Pupils shall not be held back from promotion through failure to study German or to obtain a passing mark in it. Pupils who study German and who attain in it a standing not less than 70 per cent shall be entitled to promotion without question when their standings are not below 70 per cent in more than two other studies, and not below 60 per cent in either of those studies, provided the excess of standing in German above 70 per cent is not less than the total deficiency of standing below 70 per cent in the other two studies.

It may be proper to add, however, by way of explanation, that the statutes of the state permit boards of education to provide for instruction in a foreign language not to exceed one hour per day, the regular common school branches to be given in English. This rule seems to be directly opposed to the views of your correspondents and of the authorities quoted.

JOHN JAY JONES.

Milwaukee, Wis.

Book Notices

Essentials of Botany. By Joseph Young Bergen. Illustrated, 12 mo., 380 pages. Ginn & Co. Price, $1.20; postpaid, $1.30.

Mr. Bergen's admirable botanical text-books are widely known. During the last two or three decades the science of botany has greatly broadened its scope. To the older and long cultivated descriptive, morphological and systematic phases of the subject there have been added several fresher fields of investigation entered from new points of view. Such are—plant anatomy, vegetable physiology, cytology, ecology, and last of all, genetics. This rapid expansion of the subject-matter of botany has naturally raised many new questions as to the proper presentation of the science in colleges, and particularly in secondary schools. That the pupil should receive, even in a brief course, some general notions regarding the newer aspects of the subject, should learn more of the inner structure, the vital functions, the adaptations, development and hereditary traits of plants, are theses generally accepted. It has been anticipated that this extension of botany, as taught in our schools, would tend toward a deepening as well as broadening of the pupil's insight. It has been felt, furthermore, that a new experimental aspect could be emphasized, a spirit of inquiry on the part of the pupil could be fostered, and the whole subject enlivened and infused with new interest.

During the last thirty years there has been an unprecedented production of botanical text-books, nearly all of which have been written with the hope of meeting effectively the new demands of the subject as just indicated. Most of these texts, although intended for use in secondary schools, have been written by college professors, and prepared with exalted ideas of what could be accomplished. They have therefore proved, in general, over-technical and too extended for practical use in any but the best equipped and most advanced high schools.

Mr. Bergen's series, now numbering some six botanical text-books, form a happy exception. Being the outcome of long experience in the difficulties and restrictions of high school teaching, these books are practical. Their exercises are not merely instructive, they are of a kind to hold attention and stimulate interest. They are, furthermore, ingeniously adapted to the most effective use of very limited apparatus. In this matter Mr. Bergen, as a trained chemist and skilled physicist, has had great advantage, and his books show a corresponding originality.

The latest work of his series, the Essentials of Botany, is especially designed to furnish a one-year course in secondary schools. It differs from the author's Elements of Botany chiefly in giving a considerably fuller treatment of the lower forms of plant life, and by the introduction of brief but suggestive chapters on such aspects of applied botany as plant-breeding, forestry, and the like, with some elementary discussion of the most important economic plants.

The volume abounds in exceptionally clear and well-selected illustrations, and meets more perfectly than any we have seen the rather difficult demands of the botanical committee on college entrance examinations. In how far these requirements, especially as they extend to the lower orders of plants, may prove excessive, is a matter on which there are at present widely different opinions, of which future experience alone can determine the merits.—*B. L. Robinson.*

Recollections of a New England Educator. By William A. Mowry, Ph.D., LL.D. This is practically an autobiography, but its interest is enhanced for all educators from the fact that the author's entire life was closely identified with the public schools. Being of an eminently genial and social disposition Dr. Mowry came into personal and friendly touch with the leading educators of the country, practically through two generations. He always loved a good story, as those of us know well who have enjoyed his acquaintance and friendship. This imparts a charm to his style and insures the interest of the volume. But it is far more than merely entertaining. Dr. Mowry is a thinker and a close observer, and the chapters of his autobiography are instinct with suggestion and illumination upon many a difficult educational problem. The work will have a wide sale among the teachers of the country who will find recorded in it many typical experiences, the accounts of which they will thoroughly appreciate. There is a chapter on educational journalism which gives due honor to EDUCATION, of which Dr. Mowry was formerly editor. We wish the author of this charming volume many more years of activity and peace. His career should be an incentive to younger men to enter the great profession of teaching. Silver, Burdett & Co. Price, $1.50 net.

The Ancient Greek Historians. By J. B. Bury, Litt.D., LL.D., Regius Professor of History in the University of Cambridge. The author is an authority in his chosen field of history and his word carries far. The present volume puts within reach of scholars everywhere the series of Lane Lectures delivered at Harvard University in 1908 under the auspices of the Classical Department. The ground covered is the period from the rise of Greek history in Ionia down to the first century B. C. Brief reference is made to the Homeric Poems which antedated the historic period but in which the Greeks found an equivalent to a history, so sacred and so influential upon the national life were these great epics. Herodotus and Thucydides are expounded with critical acumen and great fullness. There is a helpful bibliography at the close of the volume. The author's style is clear and charming so that his book is not only one for scholars but it will allure and instruct the general reader. The Macmillan Company. Price, $2.25.

Graded Games and Rhythmic Exercises. By Marion Bromley Newton and Ada Van Stone Harris. The games here collected and arranged are for use in the first four grades in school; they may be played either in the schoolroom or on the playground. The book is in two parts, the games for the four grades in the first part are arranged under the following heads under each grade: games of imitation, of sense-perception, traditional games and song-plays, games for general activity, and miscellaneous games of educational value. In the second part there is a similar arrangement, the subdivisions being, for the third grade: rhythmic plays, social and nature plays in rhythm, industrial imitations, town characters, rhythmic exercises, festivals, marches and folk dances. The book is a carefully worked-out sequence of games and rhythm for exercise, recreation, amusement and instruction, which may well supplant, in the opinion of the authors, training in the more formal gymnastics. The directions for playing the games and for the dances are simple and ample; the illustrations are from photographs of actual games. A. S. Barnes & Co. Price, $1.25.

Moral Instruction and Training in Schools, in two volumes. Volume I, The United Kingdom. Volume II, Foreign and Colonial. Edited by M. C. Sadler, Professor of the History and Demonstration of Education in the University of Manchester, England. With characteristic British thoroughness Professor Sadler has given a comprehensive view of the problem of moral instruction in the public schools of the world. These two volumes are modestly called a "report of an international inquiry." This inquiry was instituted by a committee comprising distinguished ladies and gentlemen in professional and business life in England and the United States. The first volume considers the general problem of moral instruction. It digs deeply to get at the roots of the problem. Such questions as the value of precept *versus* example, the relation of religion to morality in education, how the ethical efficiency of education can be increased, are discussed by experts, such as Prof. John Adams of the University of London, Rev. and Hon. Edward Lyttleton, Head Master of Eton, Prof. William James of Harvard University, Prof. G. Stanley Hall of Clark University, and others. Then in the second part of the first volume the actual status of Moral Instruction and Training in the Schools of the United Kingdom is set forth. Sunday schools and adult schools are included in the scope of the inquiry. In the second volume the subject is considered in relation to France, Belgium, Denmark, Norway, Switzerland, Germany, America, Canada, New South Wales, Australia, New Zealand and Japan. Students of this supremely important subject will find these two volumes a complete summary and a suggestive treatise upon the matter. Longmans, Green & Co., London, New York, Bombay and Calcutta. Price for the two volumes, $3.

Poems of American History. Compiled by Burton E. Stevenson. Mr. Stevenson is Librarian of the Public Library of Chillicothe, Ohio, and an author of several books. It was an exceedingly happy thought to gather into one volume these poems, of interest to every patriotic American. The book furnishes just the material needed by all teachers for the inculcation of the great lesson of patriotism. It will be a favorite source of selections for public holidays and for general declamation. It is comprehensive and complete and stands alone in its field. The arrangement of the volume is admirable and everything is made accessible by complete indexes. We unhesitatingly pronounce this one of the best books of the year in the educational field. Houghton Mifflin Company. Price, $3.00 net.

The Seven Against Thebes of Aeschylus. With introduction, critical notes, commentary, translation, and a recension of the Medicean Scholia. By T. G. Tucker, Litt.D. (Camb.), Honorary Doctor of Letters of the University of Dublin, Professor of Classical Philology in the University of Melbourne This is a work which will delight all Greek scholars. On left-hand pages the Greek text of Æschylus appears; on the opposite right-hand pages an exquisite English translation of the same. These occupy less than one half of each page, while below are copious notes on points of textual criticism, grammar, history, allusion and interpretation. The cultured mind of the scholar and the taste and refinement of the poet are blended admirably in the interpretation of this great work of Æschylus. Subtle questions of motive reasons, for the selection of particular words rather than others, and matters pertaining to the effective-

ness of the writer's art are instinctively solved; and the reader accepts the conclusions reached as right and final. The book is comparable to a masterpiece of music with its exquisite harmonies and sublime motive. There is an elaborate introduction and a complete index. University Press, London, New York: G. P. Putnam's Sons. Price, $3.00.

Report of the Commissioner of Education. Volume II, 1907. The general character of these reports is so well known as to need no extended review. The present volume is full of illuminating discussions of up-to-date school problems. The fact that a book is brought out as a government report sometimes prejudices the reader against it; but these reports of the Department of Education are indispensable to the professional educator. He will find in them the best opinions in regard to all essential matters pertaining to his profession. It would be well if the public outside of the teaching profession could be induced to spend time in the careful study of such volumes. The people pay the taxes which support the school systems, and they should be well informed upon the important principles, facts, statistics and theories that are set forth in these reports. The present volume contains valuable tables relating to school systems, private schools, normal schools, industrial institutions, universities, colleges, agricultural and mechanical schools, etc. Washington; Government Printing Office.

ENGLISH TEXTS

Silas Marner, The Weaver of Raveloe. By George Eliot. Edited by Cornelia Beare. This is a late volume in Merrill's English Texts series, and bears all the marks of perfection found in the other volumes of this excellent series of school texts. The mailing price is 40 cents. Charles E. Merrill Company. Late volumes in Macmillan's Pocket American and English Classics are Austen's Pride and Prejudice; Stevenson's Kidnapped; Bulwer's Last Days of Pompeii; Hughes' Tom Brown's School Days; Hawthorne's Mosses from an Old Manse; Whittier's Snow-Bound; Shakespeare's King Richard II. Each 25 cents, net. The Macmillan Company. In Crowell's The "First Folio," Shakespeare, we have Coriolanus, Two Gentlemen of Verona and The Taming of the Shrew. These are artistic and satisfactory little volumes, excellent for school use, for theatre patrons and the general reader. T. Y. Crowell & Co.

Outlines of the Economic History of England. A study of Social Development. By H. O. Meredith, M.A. It will be very interesting to American students to study this thoroughgoing presentation of the economic history of the mother country. Her longer life and more complex relations with other countries furnish a larger field and more complete testing of theories than can be found in the experience of the new world. Mediæval England (1066–1272), The English Nation (1272–1603), The Antecedents of the Industrial Revolution (1603–1760), The Industrial Revolution and Its Consequences (1760–1900) are the chapter headings of this book. There is a wealth of facts and a sweep of vision in these chapters, and the book will substantially confirm the conclusions reached in other countries by advanced students of economic science. London: Sir Isaac Pitman & Sons. Price, $2.00.

Outlines of Economics. By Richard T. Ely, Ph.D., LL.D. Revised and enlarged by the author and Thomas S. Adams, Ph.D., Max O. Lorenz, Ph.D., and Allyn A. Young, Ph.D. The first edition of this work appeared fifteen years ago. Since that time there has been a marked development of thought on the subject of economics. The present edition while preserving the original plan of the book adds much new material. Each chapter has been thoroughly rewritten, and the latest facts and established principles have been included, making it practically a new work. The volume is intended primarily for college and university use, and properly follows, as a more advanced treatment of the subject, the author's "Elementary Principles of Economics." The Macmillan Company. Price, $2.00 net.

* * * * * *

Introduction to the Study of Economics. By Charles Jesse Bullock, Ph.D., Professor of Economics in Harvard University. Third edition, revised and enlarged. This book is intended for use in college classes, and covers the essentials of the subject in a satisfactory manner. An atmosphere of scholarship pervades the volume. The author states as fact only that which has clearly passed out of the realm of theory, and has been demonstrated in practice. He modestly propounds tentative theories on matters that are still in dispute, and leads the pupil on to do his own observing and thinking. This book has already established for itself a place in the class room, and this third edition is chiefly concerned in bringing all statistical matters fully up to date. It also contains a fresh discussion of the localization of industry, and a new chapter upon railroad transportation. Silver, Burdett & Co. Price, $1.00.

Economics. By Scott Nearing and Frank D. Watson, Instructors in Political Economy in the Wharton School of Finance and Commerce, University of Pennsylvania. This also is a valuable text-book upon this subject, which has become a most important one in view of the complex developments of modern life, and the extensive international relations of the United States. The aim of the authors is to present the various phases of economic thought without attempting to set forth new theories. There are chapters on prosperity, consumption, natural resources, labor and industrial efficiency, capital and business organization, new forms of industry, municipal monopolies, distribution, economic experiments and economic programs. These chapter headings will indicate the scope of the volume. The discussions are lucid, and the content of the chapters comprehensive. The Macmillan Company. Price, $1.90.

Economic Zoology. An introductory text-book in Zoology, with special reference to its applications in agriculture, commerce and medicine. By Herbert Osborne, M.Sc. Professor of Zoology and Entomology in the Ohio State University. This book is based upon the thought that the relations existing between man and various lower forms of animal life are so complex, and so important that they are worthy of careful scientific study. The author takes up the general subject of Zoology, but directs the student's particular attention to those phases of it which have an intimate relation to the welfare of mankind. It is as well to get our knowledge of life processes with parasitic worms, trichina, earthworms, oysters, crayfish, grasshoppers, mosquitoes, fish, birds, etc., that are closely related to human weal or woe, as from other forms which

are comparatively remote from man's daily life. The book is more than a mere text-book. It is so written that it will interest and guide any one who wishes to understand the subject of zoology on its practical side. The Macmillan Company. Price, $2.00 net.

The Elements of Physics. A college text-book. By Edward L. Nichols and William S. Franklin. In three volumes, Volume II, Electricity and Magnetism. This is a new edition entirely rewritten. The subject is one which develops so fast that what is written to-day is out of date to-morrow. But certain things become fixed and established and students must have a text-book. This volume treats the subject with great thoroughness, and will maintain the place it has already made for itself in the front rank of college texts on this great modern science and art. The Macmillan Company. Price, $1.60 net.

Applied Mechanics for Beginners. By E. L. Hancock. In this book the author works out a consistent plan whereby as each new principle in mechanics is developed it is followed by a number of applications; in every case the student is enabled to see the applications of theory to practical problems. The book is intended as a text-book for engineering students of the junior year, the subject-matter being such as is usually covered by the work of one semester. The statement of definition, explanation and problem is singularly lucid and direct, the author having in mind the difficulties beginners in the subject of engineering encounter. Professor Hancock claims that his chapters on Moment of Inertia, Center of Gravity, Work and Energy, Friction and Impact are more complete in theory and applications than those of any other American text-book on the same subject. The Macmillan Company.

The American College. By Abraham Flexner. This is a study in contemporary education wherein the author analyses the educational procedure of our colleges from the secondary school to the day when the bachelor's degree indicates that the entire process is finished. The chapter headings will serve to indicate somewhat the trend of the treatment: the problem defined; the development of the college; the functions of the modern college; the college and secondary education; the elective system; graduate and undergraduate, and the way out. Mr. Flexner's study of the subject has led him to certain conclusions which he sets forth in no uncertain manner. He freely criticizes many features of college procedures. He deliberately says: "The important thing is to realize that the American college is pedagogically deficient, and unnecessarily deficient, alike in earnestness and in intelligence; that in consequence our college students are, and for the most part emerge, flighty, superficial and immature, lacking, as a class, concentration, seriousness and thoroughness." There is much matter here to startle the complacent believer in our present system. The book deserves serious reading. Century Company.

Periodical Notes

A pertinent Lincoln article will be found in the February *Circle Magazine*, under the title of "The Task that Needed God." James Oppenheim pictures Lincoln the night before the signing of the Emancipation Proclamation.—"A Knight Errant in Broadway," the big story in *Lippincott's Magazine* for March, is really a complete novel full of action and decidedly interesting. The writer is Rupert Sargent Holland, author of "The Count at Harvard."—A special feature of the March *Delineator* is an article by Mabel Porter Daggett, "Mrs. Roosevelt, the Woman in the Background."—The February *Harvard Quarterly Journal of Economics* has a leading article on "A Year After the Panic of 1907," by A. D. Noyes.—In *The Century Magazine*, March number, is an article claiming attention, entitled "Our Presidents Out of Doors."—Among the good things in the March issue of *Everybody's Magazine* is Dr. William Hanna Thomson's remarkable essay, "As to Ourselves," in which he tells us what we are, and what makes us men and women instead of some other kind of beasts.